

AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,
AND MINES.

ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 23 CHAMBERS STREET, NEW YORK, AT FIVE DOLLARS PER ANNUM.

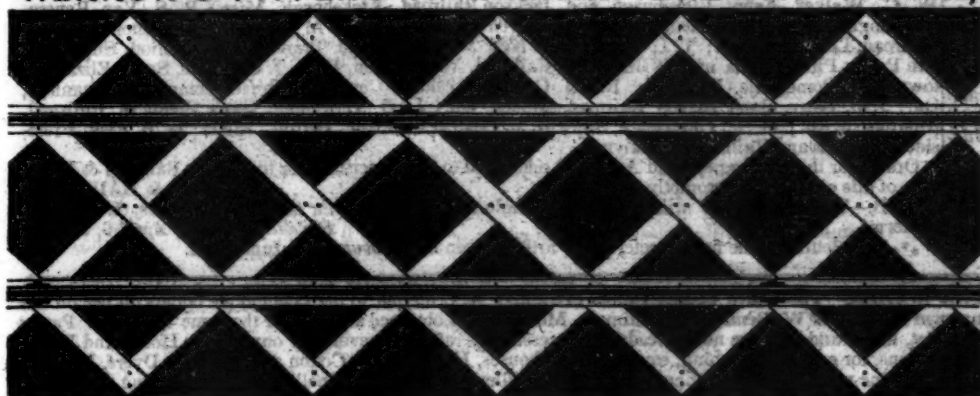
SECOND QUARTO SERIES, VOL. II, No. 1.

SATURDAY, JANUARY 3, 1846.

[WHOLE No. 497, VOL. XIX.]

W. R. CASEY, CIVIL ENGINEER, NO. 23 Chambers street, New York, will make surveys, estimates of cost and reports for railways, canals, roads, docks, wharves, dams and bridges of every description. He will also act as agent for the sale of machinery, and of patent rights for improvements to public works.

HERRON'S PATENT AMERICAN RAILWAY TRACK,



As seen stripped of the top ballasting.

**HERRON'S IMPROVEMENTS IN RAIL-
WAY** Superstructure effect a large aggregate saving in the working expenses, and maintenance of railways, compared with the best tracks in use. This saving is effected—1st, Directly by the amount of the increased load that will be hauled by a locomotive, owing to the superior evenness of surface, of line and of joint. This gain alone may amount to 20 per cent. on the usual load of an engine.—2d, In consequence of the thorough combination, bracing, and large bearing surface of this track, it will be maintained in a better condition than any other track in use, at about one-third the expense.—3d, As action and reaction are equal, a corresponding saving of about two-thirds will be effected in the wear and tear of the engines and cars, by the even surface and elastic structure of the track.—4th, The great security to life, and less liability to accident or damage, should the engine or cars be thrown off the rails.—5th, The absence of jar and vibration, that shake down retaining walls, embankments and bridges.—6th, The great advantage of the high speed that may be safely attained, with ease of motion, reduction of noise, and consequently increased comfort to the traveller.—7th, The really permanent and perfect character of the Way, insuring regularity of transit. To which may be added the great increase of travel, that would be induced by the foregoing qualities to augment the revenue of the railroad.

The cost of the Patent track will depend on the quantity and cost of iron and other materials; but it will not exceed, even including the preservation of the timber, the average cost of the tracks on our principal railroads. Generally, the timber structure, fastenings and workmanship, exclusive of the cost of the iron rails, will be from \$2,300 to \$4,000 per mile. On this structure, rails of from 40 to 50 lbs. per yard, will be equal in effect to

60 and 70 lbs. rails laid in the usual way. The proprietors of a road, furnishing approved materials in the first instance, the undersigned will construct the track on his plan in the most perfect manner, with recent improvements, for one thousand dollars per mile. And he will farther contract to maintain said track for the period of ten years, furnishing such preserved timber and iron fastenings as may be required, and keeping said track in perfect adjustment, under any trade not exceeding 100,000 tons per annum, or its equivalent in passenger transportation, for Two hundred dollars per mile per annum. To insure the faithful performance of this contract, he will pledge one-fourth of the cost of construction, with the accruing interest thereon, regularly vested, until the completion of the contract. So that a company, by securing payment to the undersigned at the specified period, will have only \$750 per mile to pay for the workmanship on the track, without any charge being made for the use of the patent, the subsequent payments, for maintenance of way, and amount withheld, being made from the large margin of profits that will result from its use.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia.

A general average of the repairs done on six of the most successful railroads in this country, for a period of from six to eight years' use has been found to exceed \$625 per mile per annum, exclusive of renewal of rails. But few roads in this country carry as much as 100,000 tons per annum. When a road exceeds that quantity, the repairs due to the additional tonnage, up to 200,000 tons, will be charged at one mill per ton; over the latter, and not exceeding 300,000 tons, nine-tenths of a mill, etc. Where there are two tracks to maintain, a large reduction upon those rates will be made.

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THE AMERICAN RAILROAD JOURNAL is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

RATES OF ADVERTISING:

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5 00

ENGINEERS and MACHINISTS.

J. F. WINSLOW, Albany Iron and Nail Works, Troy, N. Y. (See Adv.)
TROY IRON AND NAIL FACTORY,
H. BURDEN, Agent (See Adv.)
ROGERS, KETCHUM AND GROSVENOR, Patterson, N. J. (See Adv.)
S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)
NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)
KITE'S Patent Safety Beam. (See Adv.)
FRENCH & BAIRD, Philadelphia, Pa. (See Adv.)
NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)
ROSS WINANS, Baltimore, Md.
CYRUS ALGER & Co., South Boston Iron Company.
SETH ADAMS, Engineer, South Boston.
STILLMAN, ALLEN & Co., N. Y.
JAS. P. ALLAIRE, N. Y.
H. R. DUNHAM & Co., N. Y.
WEST POINT FOUNDRY, N. Y.
PHENIX FOUNDRY, N. Y.
R. HOE & Co., N. Y.
ANDREW MENEELY, West Troy.
JOHN F. STARR, Philadelphia, Pa.
MERRICK & TOWNE, do.
HINCKLEY & DRURY, Boston.
C. C. ALGER, Stockbridge Iron Works, Stockbridge, Mass.
BALDWIN & WHITNEY, Philadelphia, Pa.
THOMAS & EDMUND GEORGE, Philadelphia. (See Adv.)

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 3 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Eting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, Agent.
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

••• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

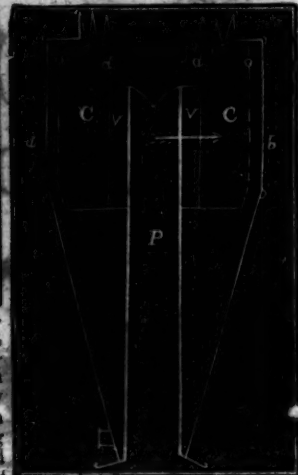
These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, or to Messrs. Baldwin & Whitney, of this city, will be promptly executed.

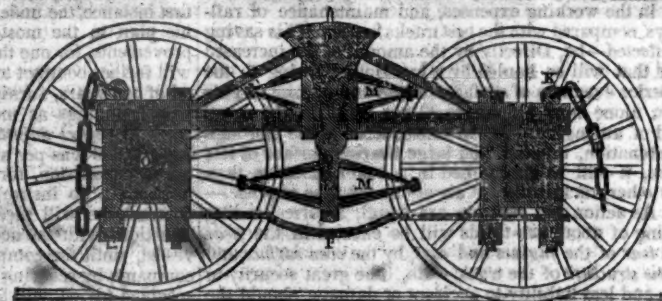
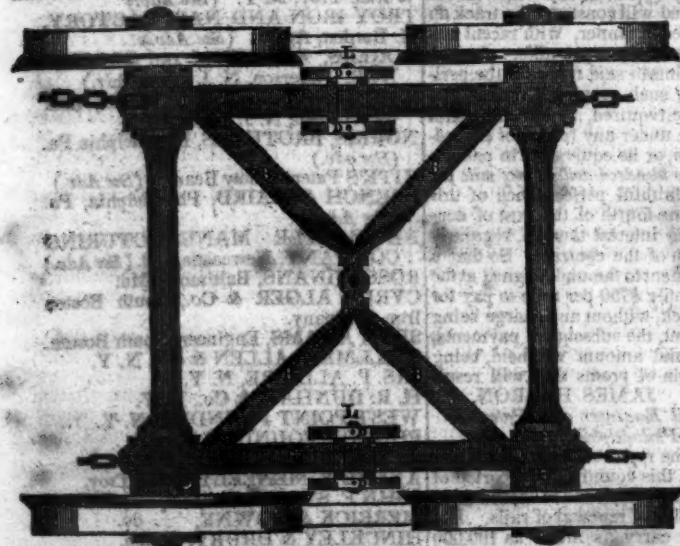
N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

••• The letters in the figures refer to the article given in the Journal of June, 1844. ja45



BENTLEY'S PATENT TUBULAR STEAM BOILER. The above named Boiler is similar in principle to the Locomotive boilers in use on our Railroads. This particular method was invented by Charles W. Bentley, of Baltimore, Md., who has obtained a patent for the same from the Patent Office of the United States, under date of September 1st, 1843—and they are now already in successful operation in several of our larger Hotels and Public Institutions, Colleges, Almshouses, Hospitals and Prisons, for cooking, washing, etc.; for Bath houses, Hatters, Silk, Cotton and Woollen Dyers, Morocco dressers, Soap boilers, Tallow chandlers, Pork butchers, Glue makers, Sugar refiners, Farmers, Distillers, Cotton and Woollen mills, Warming Buildings, and for Propelling Power, etc., etc.; and thus far have given the most entire satisfaction, may be had of D. K. MINOR, 23 Chambers st. New York.

DAVENPORT & BRIDGES' PATENT CAR AND TRUCK.



DAVENPORT & BRIDGES' IMPROVED PATENT IRON TRUCK, FOR RAILROAD CARS, is presented above, and the attention of Railroad Companies is respectfully invited to the following description of their justly celebrated invention.

These Trucks are adapted as well for eight-wheeled passenger cars as for baggage and freight cars, giving to each a more agreeable and easy motion than any other Truck heretofore constructed or in use. They are simple in their construction, combining strength and great durability, although weighing at least twelve hundred pounds less than the common Trucks. Besides these excellences, by reason of the elasticity of the braces, B, B, B, B, as seen in the drawing, and the other peculiarities of construction, made for inside or outside bearing, the weight is equalized upon all the wheels, and yet any one wheel from the track, thus rendering it almost impossible to run a car off.

Being bound, and haring as it were but four joinings, they are protected from injury by lateral strains, and in case of damage are easily repaired. These excellences have been fully tested by use, for a long time, on the Eastern, the Fitchburg and Long Island railroads; and for proof of the above stated superiority of these Trucks over all others, we refer to the experience of those who have used and run them.

CAMBRIDGEPORT, April 1, 1845.

DAVENPORT & BRIDGES.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

BARCLAY IRON WORKS

WELDED WROUGHT IRON TUBES

From 4 inches to $\frac{1}{2}$ in. calibre and 2 to 35 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch; with Stop Cocks, T, L, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER fittings.

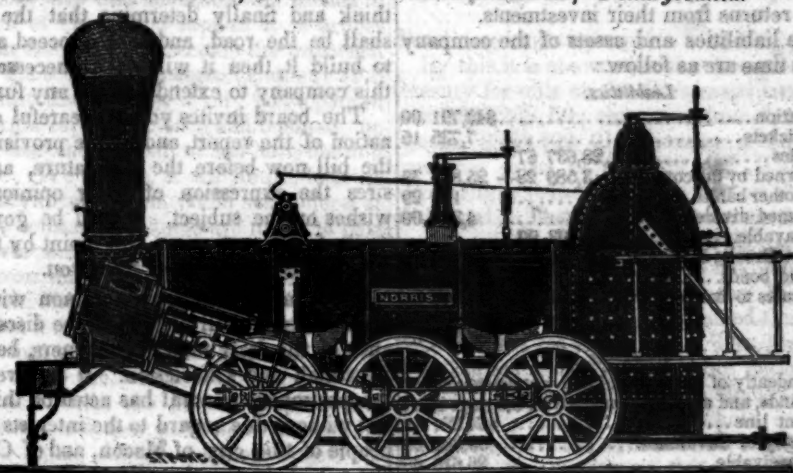


Manufactured and for sale by
MORRIS, TASKER & MORRIS.
 Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

W. Mc. C. CUSHMAN, Civil Engineer,
Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applications must be post paid.

BUSH HILL, PHILADELPHIA, Pennsylvania



Class	1,	15 inches	Diameter of	Cylinder,	×	20 inches	Stroke.
"	2,	14	"	"	×	24	"
"	3,	14	"	"	×	20	"
"	4,	12	"	"	×	20	"
"	5,	11	"	"	×	20	"
"	6,	10	"	"	×	18	"

NORRIS, BROTHERS.

LAND AND NEW YORK IRON AND
Coal Company are now prepared to make contracts
for Rails of all kinds. Address the Subscriber, at
Jennon's Run, Alleghany County, Maryland.
WILLIAM YOUNG

iv451m President

1. SITES in the immediate neighborhood of *Baltimore* *Coal* and *Iron Ore*, of the first quality, at Ralston, Lyoming Co., Pa. This is the nearest point to tide water where such coal and ore are found together; and the communication is complete with Philadelphia and Baltimore by canals and railways. The interest on the cost of water power and lot is all that will be required for many years; the coal will not cost more than \$1 to \$1.25 at the mill sites, without any trouble on the part of the manufacturer; rich iron ore may be laid down still more cheaply at the works; and taken together these sites offer remarkable advantages to practical manufacturers with small capital. For pamphlets, descriptive of the property, and further information, apply to Archibald McIntyre, Albany, to Archibald Robertson, Philadelphia, or to the undersigned, at No. 23 Chambers street, New York, where may be seen specimens of the coal and ore.

W. R. CASEY, Civil Engineer.

Mill Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 feet, with lathes, work benches, &c.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 feet two stories high, with a shed part 45x20 feet containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street. 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two sto-

Blacksmith shop, 49 feet long by 20 feet wide.

For terms apply to **HENRY ANDREWS 48**

State st., or to CURTIS, LEAVENS & CO., 106
State st. Boston, or to A. & G. BALSTON & Co.

Philadelphia.

CYRUS ALGER & CO., South Boston Iron
Company.

Central, Ga., Railroad.
To the Stockholders of the Central Railroad
and Banking Company of Georgia:

The accompanying report of the chief engineer will exhibit to you, in detail, the amount earned by the railroad during the year ending the 2d inst., with the expenses of the road for the year. Annexed is a statement, certified by the cashier, which will show you the monies received by the company during the year ending 2d inst. from all sources; and the monies expended upon all accounts, also the state of the company on the last-mentioned day.

The cash received during the year for profits of the road exceeds the amount earned by the company. This is owing to the fact that part of the last year's earnings have been collected in this year, and the present year's collections have, with the exception of one week, been paid in.

It will be seen that the road receipts for this year have not been so large as was anticipated. This is owing first to the shortness of the cotton crop, and, secondly, to the backwardness in bringing what has been made to market. Whilst the quantity of up-freight has been well sustained, the quantity of cotton transported has fallen short, in the last four months, over 15,000 bales. The freight on that quantity of cotton, at existing rates, would have placed the receipts of the company over \$400,000. The up-freights have been during the past autumn 5 cents per hundred, and 2 cents per foot less than last year, and the freight on cotton has been 10 cents per hundred less than during November, 1844. The quantity of cotton brought during the last cotton year, reckoning from 1st August to 1st August, was 125,497 bales. The current annual expense is detailed in the engineer's report. The amount expended on road account beside the current expense, has been as follows:

Right of way.....	640 00
Iron rails and plates.....	2,451 31
New stock.....	74,870 06
Construction of road.....	28,704 23
Account stage line.....	17,435 67

\$194,105 27

The motive power now owned by the company is considered fully adequate to the business which may offer. But it is the intention of the board to continue for a short time the building of burden cars—the wheels, axles and lumber for which are on hand. The lands required for depots have been purchased and paid for, and the buildings, except an engine-house, at the midway station, and a passenger-car house at the Savannah depot, now building, have been erected and paid for.

The board now feels itself in a condition to commence the regular discharge of the debts of the company. Since your last meeting, efforts have been made, without success, to borrow money to defer the payment of what the company owes, that the profits might, to a prudent extent, go to the stockholders, in the way of dividends, reserving annually a sum to meet, in the end, the amount borrowed. Bonds, with coupons annexed, drawing

interest at 7 per cent., payable semi-annually in New York or Savannah, at the option of the buyers, have been prepared, and will be disposed of as they may be wanted, at par. The board believes that, in a short time, as much money can be borrowed in this community on these bonds as will enable the company to begin the payment of dividends. But if disappointed in this, the board cannot doubt the ability of the company to discharge the debt it owes in three years from this time.

It is intended, as the debts are paid, to issue stock by way of dividends for all such net profits of the road as are taken to pay debts, until the capital stock now on the books, at \$2,048,715, shall amount to \$2,600,000, a sum below the cost, and clearly within the real value of the road and its equipments. Such plan, it is believed, will greatly relieve the stockholders, who have waited so patiently for returns from their investments.

The liabilities and assets of the company at this time are as follow:

Liabilities.	
Circulation.....	\$42,791 00
Road tickets.....	7,735 15
Deposites.....	28,637 67
Less owned by the company.....	3,589 28—25,848 39
Due to other banks.....	106 29
Unclaimed dividends.....	4,342 60
Bills payable.....	190,903 20
Do. acct. Brooks & Barden.....	15,000 00—135,903 20
Railroad bonds.....	440,097 00
Certificates to banks.....	13,311 00
	\$669,334 63

Resources.	
Independently of the railroad and appurtenances of all kinds, and also independently of the stage line:	
Discount line.....	\$74,321 19
Bonds city of Savannah.....	55,000 00
Bills receivable.....	26,615 68
Stock in bank of Georgia.....	30,780 00
Banking houses and lots.....	42,519 37
Real estate taken for debt.....	5,857 36
Due by other banks.....	202 18
Cash, Dec. 2, 1845.....	13,937 93
	\$239,233 71

After allowing for all bad debts and depreciation of real estate and banking houses, it is estimated that these assets will yield \$200,000.

The last report exhibits a table showing when the bonds of the company fall due.

Experience proves that the circulation of the bank and the deposits, even without any extension of banking business, will not go lower than \$60,000; but it is believed that the circulation, based upon capital so substantial as the railroad, may be increased, in a short time, to a considerable extent.

Since your last annual meeting, the board called the stockholders together to receive the report which you required them to make, on the subject of the extension of the road to Columbus. The meeting was held at Macon in October last. The report and proceedings of the meeting thereon are submitted herewith for your consideration. Application has been made for a charter to extend the road to Columbus, and the bill for the amendment of the charter as it has passed the senate, is also herewith submitted.

Recent events show fully the necessity for this extension. It is alone by such extension, or by a road from Barnesville to Columbus,

that we can be certain that the great thoroughfare to New Orleans and Texas will be through Savannah, Macon and Columbus. If the road be carried to Columbus, no other line of travel can ever be established to interfere with us. And independently of profits from travel, it is certain that the freights on such a road would be profitable, not only for the extension, but vastly to our existing road.

The new proprietors of the Monroe railroad seek to build a road from Barnesville to Columbus, and applications are now before the legislature to procure the necessary charter for rendering certain the construction of a railroad to Columbus. You will see by the report of October, that the board is of opinion that a railroad direct from Macon to Columbus, is preferable to a road from Barnesville to the same point; but if the various parties in interest shall continue to think and finally determine that the latter shall be the road, and shall proceed at once to build it, then it will not be necessary for this company to extend its road any further.

The board invites you to a careful examination of the report, and of the provisions of the bill now before the legislature, and desires the expression of your opinion and wishes on the subject. It will be governed in its future action on this point by the instruction it shall receive from you.

The company feels, in common with the community, the ill effects of the discontinuance of the daily mail, in steamers, between Savannah and Charleston. It believes that the postmaster-general has acted on this subject without due regard to the interests of the people of this city, of Macon, and of Columbus; and hopes that he will review his course, and adopt the plan of continuing the mail with the steamer line of Messrs. Brooks & Barden. In order that you may understand fully the efforts of the board of directors to improve the mail facilities and travel through our city and line, the correspondence of the president with the department is submitted to you. This correspondence, with such explanations as will be given on your request, will place you in possession of all the facts bearing on this subject—now one of such deep interest to all persons connected with the company's business and prospects. Considering that the corporation of the city holds near one-fourth of the stock of the company, and that so large a portion of the community is directly interested in our affairs, the board earnestly requests you to take this subject of mail transportation and travel into your serious consideration.

We have built a railroad which stretches two-thirds of the way across the state of Georgia, and which, with proper united effort on the part of the citizens of Macon and Columbus, is destined to be part of the great line of mail communication and travel from north to south. The prospect is fair for the speedy completion of the Monroe railroad to its point of junction with the western and Atlantic road, through which we may expect to receive a fair share of western freights and travel. Our communication through Charleston with the line by Wil-

ington to New York, should be kept up daily in the perfect manner exhibited by Messrs. Brooks & Barden, to show the advantages and comfort of the route through Savannah. The present is the important moment to render permanent such a daily line of steamers, and to push on to the city of Columbus. South-western Georgia, the most fertile region in our country for cotton, now asks of the legislature a charter for a railroad to Macon, that its people may find for their produce an Atlantic market; and there can be no doubt of the grant of the rights which they seek. The agriculturists of that portion of the state will unite to build that road, and it is earnestly hoped will find substantial aid from Savannah, which will derive so great advantages from their contemplated work.

Our city will find advocates and friends in all parts of Georgia to support it in proper exertions on its part to become the important city of the south. We cannot shut our eyes to the fact that already a very large portion of Georgia capital, produce and business, go to increase the wealth of our neighboring sea-port. We cannot, if we would, look indifferently or coolly on, while such efforts as we may constantly witness are made, to pass all travel and trade through the state to Charleston, thus cutting off the three cities of Savannah, Macon, and Columbus.

Denied a fair consideration in the mail arrangements of the government, and pressed by spirited rivals, we must buckle on our armor, and, with the help of a protecting Providence, and that patriotic feeling which in truth exists, though it may appear to slumber, in the hearts of all Georgians, for their ancient sea-port, work out our salvation and prosperity. These remarks are made by your board in no spirit of unkindness towards those who seek to obtain the wealth which would seem, on all just principles, to be destined for us, for we are all members of the same great household; but they are intended to awaken you to the wisdom, yea, the necessity, of not looking back since you have put your hands to the plough; but rather of pressing on to the accomplishment of the great work which we have to do.

R. R. CUTLER, President.

From an examination of the summary of complete routes of the Danbury railroad, we find that the average cost per mile on all the routes given is \$27,594 96.

The cost of the Sound route, with the same superstructure, according to Professor Twining's report, is \$32,166 79 per mile. To this should be added \$231 08 for the increased price at which Mr. Brodhead puts the iron, &c., over the estimate of Professor Twining, which makes the real difference, in the cost per mile of the Danbury and Sound routes \$4,802 91 per mile in favor of the Danbury railroad, or more than \$336,000, on the same length of line, in favor of the inland route.

The length of the Sound route, according to Professor Twining, is 69.43 miles to the Harlem railroad.

The length of the Danbury route to the

Harlem railroad extension need not be more than 69.33 miles, and may be only 66.33, depending on the course finally adopted for the extension of that railroad. Assuming however, the same length for the two routes, there will be a difference in the first cost of more than \$336,000 in favor of the Danbury route, or more than 17 per cent. on its entire cost.—*Hartford Courant*.

Canal Revenues of Ohio.—Canal tolls received during the fiscal year, ending Nov. 15, 1845.

Ohio canal	\$252,199 40
Miami canal	74,319 71
Miami Extension canal	32,007 68
Wabash and Erie canal	73,907 47
Muskingum Improvement	28,461 24
Hocking canal	4,510 73
Walhonding canal	1,183 82

Total canal tolls received - \$466,598 51

By this it is shown that the receipts at the treasury for tolls on the Ohio canal last year was \$335,268 50; this year from the same source, \$252,199 01; showing a decrease from this canal of \$83,069 48. There is also a slight reduction in the tolls on the Miami canal. There is an increase on the Miami Extension canal of \$19,952 29 over that of last year, though it has been navigated but a short time. The receipts on the Wabash and Erie canal have nearly doubled this year upon the receipts of the last. The Muskingum Improvement remains about stationary, but there is a falling off on the Hocking and Walhonding canals. The whole amount collected on all the canals in 1844, was \$504,031 08. The receipts of this year show a reduction of \$37,432 57, which is less than was anticipated from the stagnation of business, caused by the severe drought in many parts of the state before harvest time.

Right of way.—At a numerous meeting of the citizens of Bedford county, Pa., the following resolutions were adopted:

Whereas, it is in contemplation to apply to the legislature of Pennsylvania at its next session for a law authorizing the Baltimore and Ohio railroad company to extend its road from the town of Cumberland, in the state of Maryland, through the state of Pennsylvania to the city of Pittsburgh. And whereas, a continuous line of railroad from the city of Philadelphia to the city of Pittsburgh within the territory of the state of Pennsylvania is required by the great increase of trade between the east and west and the best interests of the commonwealth. And whereas, it is believed that a connection between Cumberland valley railroad, and the proposed extension of the Baltimore and Ohio railroad at the mouth of the Little Wills creek in this county, is the readiest and most feasible mode of obtaining such a continuous line of railroad. Therefore,

Resolved, That it is the opinion of this meeting that the interests of the commonwealth of Pennsylvania will be advanced by granting to the Baltimore and Ohio railway company the right of way for the extension of their road to the city of Pittsburgh.

Resolved, That, inasmuch as the southern

and southwestern counties of Pennsylvania, which have heretofore been severely taxed for the support of the great system of internal improvements constructed by the commonwealth without deriving from them any advantages will be greatly benefited by the extension of the Baltimore and Ohio railroad to Pittsburgh, it is due to them that the right of way asked should not be denied by the legislature.

Right of Way.—In the Virginia house of delegates, on Monday, the following resolution was offered by Mr. Edgington:

Resolved, That the president pro tem and board of directors of the Baltimore and Ohio railroad company be, and they are hereby respectfully requested to communicate to this house, without delay, copies of all communications transmitted to said company since the passage of the act of the 19th of February last, entitled "an act to authorize the Baltimore and Ohio railroad company to construct their road through Virginia to the Ohio river, and for other purposes," which relate to or advise the acceptance or rejection of that act.

Mr. Garnett, before the question was taken on the above resolution, wished to know what right the legislature had to call on the Baltimore and Ohio railroad company. Mr. Edgington regarded it as a Virginia company, since it held a charter from this legislature. He desired the information sought for the instruction of the legislature, that the matter might be fully understood. Mr. Lee had no objection, provided the company would not incur expense in furnishing the information. After further explanation by Mr. Edgington, the resolution was agreed to.—*Baltimore American*.

Extracts from the Message of Gov. Whitcomb of Indiana.—Since the last adjournment of the legislature, a grant of one-half of all the public lands in the Vincennes district has been made by the United States to Indiana, to aid in the extension and completion of the Wabash and Erie canal, from Terre Haute to Evansville.

The completion of this canal, however advantageous it may be to the interests of those within its vicinity, it is manifest, claims your favorable regard, as the representatives of the state at large, chiefly as a revenue measure.

And in that light it is believed to possess claims of a high character. The work, when finished, passes through a country of almost unrivalled fertility, and rapidly increasing in population. Reaching in its full length, from lake Erie to the Ohio river, it will be the longest work of the kind in the United States. It will be second in importance only to that which connects lake Erie and Hudson river, and will make one of the links in the great chain of internal navigation from the northeastern to the southwestern extremities of our growing confederacy.

It was stated in a quarter entitled to respect and confidence, at a meeting held at Terre Haute in May last, that if the state were to pay to her bond-holders by a state tax and otherwise, a portion of her public debt, it was thought that they would be prepared to take

the profits of the canal for the balance. The gentleman who expressed this opinion, is now in attendance as the representative of our foreign bond-holders and has verbally advised me that he will shortly prepare a communication offering a liberal arrangement, to be laid before the general assembly.

Cleveland, Columbus and Cincinnati Railroad Company.—The two companies of engineers who have been examining the routes for this road have returned to this city, and will at once commence making estimates on the several lines, and are preparing a report which we learn will occupy several weeks.

We understand that one line was run from this through Harrisville, Wooster, Loudonville and Mount Vernon to Columbus. Another from Harrisville through Ashland, and a few miles north and west of Mansfield, and midway between Mount Vernon and Delaware to Columbus. Another from Columbus north, through Delaware to intersect the last line, and also an examination was made of the country between the point of intersection and Mansfield, and between Mansfield and Mount Vernon. All are practicable at a moderate expense, excepting the short line between the intersection referred to and Mansfield. Columbus may therefore be reached by Wooster and Mount Vernon—by Ashland, Mansfield and Mount Vernon, and by Ashland and Delaware. The distances and cost on the different lines are not materially variant, and we may therefore infer that the selection will depend upon the most liberal subscriptions to the stock and releases of right of way.

We are told the engineers were treated throughout with great kindness and civility. They state the anxiety among the people to have the proposed road made as very great, and that large subscriptions may be confidently anticipated.

We see a notice in the Columbus papers for a meeting of the commissioners of the Columbus and Lake Erie railroad company, with reference to an organization. If this be intended to head our project, we beg the directors to work on as they have begun, with energy and spirit, or they may find that delay will create obstacles difficult to surmount.—*Cleveland Herald.*

Troy and Greenbush Railroad.—It will be perceived that the winter arrangement is now complete. Eight trips a day are made each way. The river is crossed by means of a sleigh, from the steamboat office at the foot of State street. The sleigh ride is free—fare on the road 12½ cents.

The Troy and Greenbush railroad company have declared a dividend of 4 per cent payable on the 10th of January next. This favorable result has been produced from the earnings of the road for the last six months. A surplus of 1 per cent remains undivided.

Albany Argus.

Utica and Schenectady Railroad.—We are informed that the directors of this company, at a meeting held a few days since, resolved to place a second daily run on their

road, which will commence on or about the 20th inst.—*Albany Evening Journal.*

Illinois Canal.—We understand, says the Ottawa Constitutionalist, from Mr. Gooding, the engineer, that the work on the whole line is now progressing very rapidly, there now being at work 1500 men, and a proportionate number of teams, carts, etc.

The basin and channel at La Salle will be pretty much completed by the 1st of January next. The force on the line is augmenting very fast.

Atmospheric Railways: Hallett's Plan.

The objects in view are to diminish the cost of the main and valve, simplify their parts, and diminish leakage which occurs to so great an extent with Clegg's valve. The main is cast with a pair of jaws, one on either side of the long slot, through which the coulters travel. These jaws are formed to a particular curve (see fig. 1.) and are cast against "a chill" by which they are obtained perfectly smooth, fair, straight, and hard, and thus the cost of "planing" the valve faces is avoided. The valve consists of a continuous hollow tube or hose, of woven hemp, coated throughout with caoutchouc, like the tube of a stomach-pump, or other such instrument. This tube is maintained full of water or brine in cold climates; and when it is closed as a valve, is forced in between the jaws of the main, and acts like a sort of continuous cork. As the coulters, etc., travel along, the tube is lifted up a few inches out from the jaws, by suitably formed rollers, and as soon as the coulters has passed, it is pressed back again into the cavity, between the jaws by a roller pressing upon its upper surface.

In place of a hollow hose full of fluid under a constant small head, or of compressed air, a compound continuous cork formed of 4 cotton ropes embedded in caoutchouc. This is, in fact, one of Brockedon's patent stoppers of indefinite length. Either arrangement would admit of sufficient extensibility in length to allow the lifting up and pressing down of the valve at the passage of the coulters without injury.

The outer surface of the valve, in either case, should be coated with an unguent, which will not act on the caoutchouc; if vulcanized india rubber be used, common palm oil will answer. Pinkus's valve was a continuous flat band of leather, and failed—because, when close, it had no tendency to keep in its seat, and its edges were thrown up by the pressure of the atmosphere on its centre part.

Hallett's valve consists of two continuous tubes full of compressed air, by the elasticity of which they are forced against each other, and the main thus attempted to be made staunch; but the serious defect appears to be, that the tendency of the atmospheric pressure upon the outside of these artificial lips is to force them assunder, so that the exhaustion of the tube tends to produce, in place of to diminish, the leakage of the valve. The present contrivance, which has something in common with both Pinkus' and Hallett's arrangements, though invented long before the latter published his plan, appears free from the dis-

advantages of either, and to possess several advantages not offered by any other valve proposed.

The letters refer in common to all the figures. Fig. 1, is a transverse section of the improved main and valve. *a a* is the main; *b b*, the valve seat, the opposite faces chilled; *c*, the tubular valve in its seat; when raised at the passage of the coulters it assumes its cylindrical form, as shown in dotted lines, *d d d d*, passing over the sheaves, or rollers *m*, etc.; *t*, is the coulters seen endwise; *h*, the rib of the travelling piston.

Fig. 2, is a plan and section horizontally of the atmospheric main, *a a*; *b b* the valve seat or jaws, cast with "chilled" faces—(these are best seen in section, fig. 1.) The lengths of main are put together with abutting rabbetted flanges, or rather lugged joints, at every fifteen feet, with a flange of india rubber $\frac{1}{2}$ inch thick between, the elasticity of which allows for expansion of the main, and yet keeps the joint air-tight.

Fig. 3, is a horizontal section of the tube, and plan of the piston.

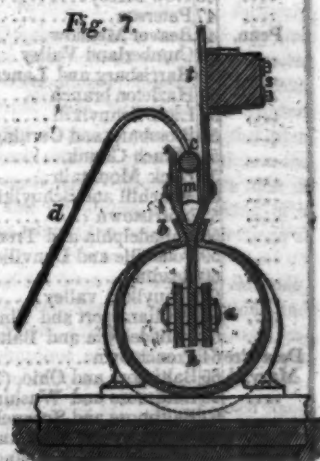
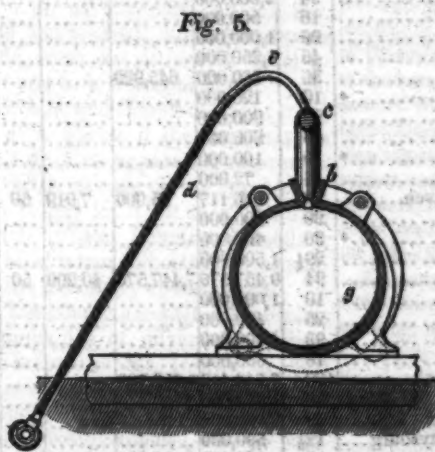
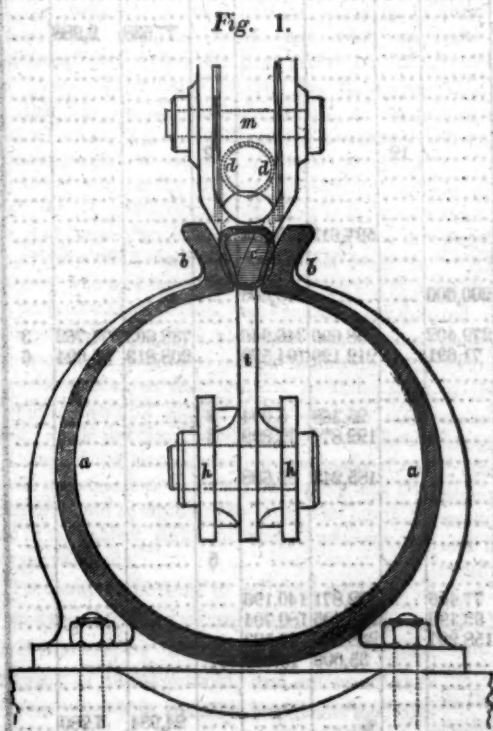
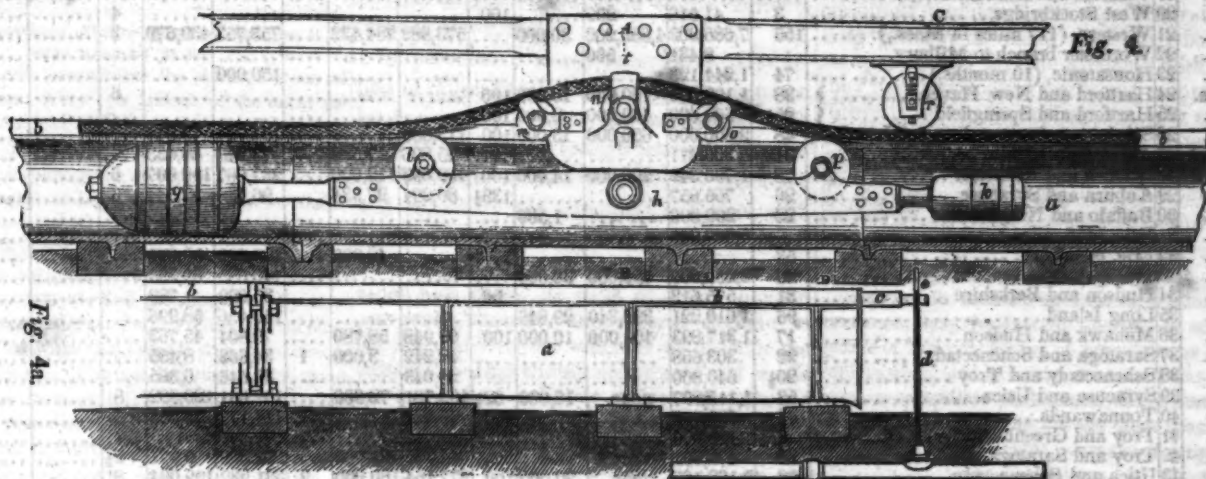
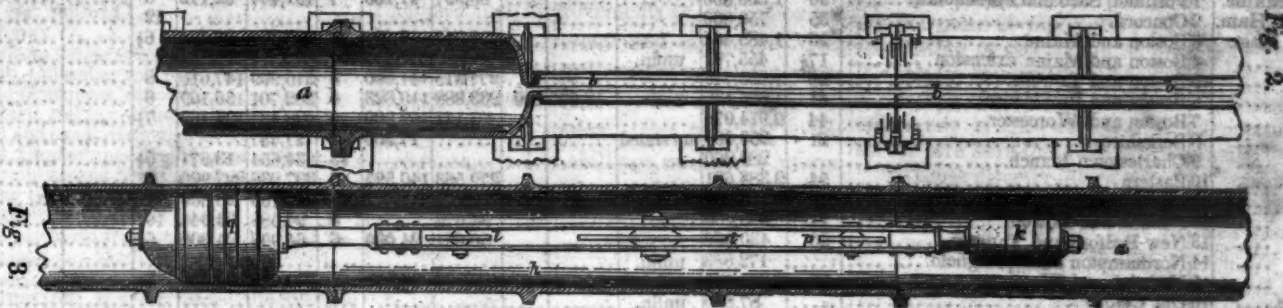
Fig. 4, is a vertical section of the tube, and elevation of the piston.

Fig. 4a, is an elevation of the entrance of the tube.

Fig. 5, transverse section of the valve as raised; fig. 6, a transverse section of it as closed; fig. 7, a transverse section on the line A B of fig. 4; and fig. 8, a transverse section on the line C D of fig. 4.

From the facility given for support of "the cone," by the "chill," for casting, the valve seat faces on the main, as thus designed, can be as readily cast in 15 feet lengths as in 9 feet, which has been the limit of Samuda's practice. *c* is the tubular valve of woven hose, covered with caoutchouc, or of caoutchouc and cotton solid: it is here shown hollow, and is maintained full of water by a small flexible tube *d*, at either end of the section of main joined to the extremity of the brass nose and bend *e*. This little tube connects also with a small water-main *f*, laid under the ballast of the road, and in connection with a head of from 5 to 10 feet of water, by which the tubular valve is always kept full and "plump." This little supply tube is so plated as to be passed by the coulters, etc., and to permit the valve to be lifted up and pressed back again into its seat. *g*, is the travelling piston-head; *h*, the rib or frame of the travelling gear; *k*, the balance weight; *l, m, n, o*, the hollow-grooved rollers, made like ordinary "sheaves," which gradually lift the tubular valve out of its jaw-shaped seat, to permit the coulters to pass with the piston; the first and last of these, *l* and *o*, are narrow enough to pass up between the jaws, or into the longitudinal slot, and are of hardened steel; *r* is the roller, with a slightly concave edge or rim, which, attached to the porch of the leading carriage, *s*, presses down the tubular valve into its seat, something like forcing a continuous cork into the neck of a bottle, and so leaves the main ready for fresh exhaustion after the passage of a train: *t* is the coulters of plate iron $\frac{3}{4}$ of an inch thick, carries the rollers, piston, etc., and attached to the perch *x*.

MR. MALLET'S NEW LONG VALVE AND MAIN FOR ATMOSPHERIC RAILWAYS.



AMERICAN RAILROAD JOURNAL.

AMERICAN RAILROADS.															
NAMES OF RAILROADS.		Length in miles.	Cost.	Loans and debts.	Number of shares.	Paid on share	1843.		Div. per cent.	1844.		Div. per cent.	1845.		Div. per cent.
							Gross.	Nett.		Gross.	Nett.		Gross.	Nett.	
Maine.	1 Portland, Saco and Portsmouth.....	50	1,200,000				89,997	47,166	7	131,404	62,172	6			
N. Ham.	2 Concord.....	35	750,000									12			
Mass.	3 Boston and Maine.....	56	1,485,461				178,745	68,499	6	233,101	86,401	6 1/2			
	4 Boston and Maine extension.....	17 1/2	455,703	unfin.											
	5 Boston and Lowell.....	28	1,863,746				277,315	144,000	8	316,909	147,615	8			
	6 Boston and Providence.....	41	1,886,135	none.	18,600	100	233,388	110,823	6	282,701	156,109	6			
	7 Boston and Worcester.....	44	2,914,078				40,141	162,000	6	428,437	195,163	7 1/2			
	8 Berkshire.....	21	250,000	not stated				17,500	7	17,737					
	9 Charlestown branch.....		280,260						13	34,654	13,971	5 1/2			
	10 Eastern.....	54	2,388,631				279,563	140,595	6	337,238	227,920	8			
	11 Fitchburg.....	50	1,150,000	just op'd						42,759	26,835				
	12 Nashua and Lowell.....	14 1/2	380,000				84,079		8	94,588	34,944	10			
	13 New Bedford and Taunton.....	20	430,962				50,671	24,000	6	64,998	24,000	6			
	14 Northampton and Springfield.....		172,883	unfin.											
	15 Norwich and Worcester.....	66	2,290,000	900,000	16,535	100	162,336	24,871		230,674	99,464	3			
	16 Old Colony.....		87,890	unfin.											
	17 Stoughton branch.....	4	63,075	unfin.											
	18 Taunton branch.....	11	250,000					20,000	8	96,687	20,000	8			
	19 Vermont and Massachusetts.....														
	20 West Stockbridge.....	3	41,516	200		100						4			
	21 Western, (117 miles in Mass.).....	156	7,686,202	4,686,202	30,000		573,882	284,432		753,753	439,679	3			
	22 Worcester branch to Milbury.....		8,431	506						150,000					
	23 Housatonic, (10 months.).....	74	1,244,123												
Conn.	24 Hartford and New Haven.....	38	1,100,000	100,000	10,000	100						6			
	25 Hartford and Springfield.....	25 1/2	600,000	400,000	2,000	100									
	26 Stonington, (year ending 1st Sept.).....	48	2,600,000	650,000	13,000	100	113,889			154,724	79,845				
N. York.	27 Attica and Buffalo.....	31	336,211				45,896	7,522		73,248	48,033				
	28 Auburn and Rochester.....	78	1,796,342	200,000	14,000	100	189,693	112,000		237,667	152,007	6			
	29 Auburn and Syracuse.....	26	766,657			133 1/2	86,291	27,334		96,738	52,544	6			
	30 Buffalo and Niagara.....	22	200,000		1,500										
	31 Erie, (446 miles.).....		5,000,000												
	32 Erie, opened.....	53						48,000		126,020	59,075				
	33 Harlem.....	26	2,250,000	750,000	30,000					140,685	62,399				
	34 Hudson and Berkshire.....	31	575,613		50					35,029	1,789				
	35 Long Island.....	96	1,610,221	392,240	29,846					153,456	58,996				
	36 Mohawk and Hudson.....	17	1,317,993	400,000	10,000	100	69,948	58,780		79,804	45,763				
	37 Saratoga and Schenectady.....	22	303,658				42,242	3,000	1	34,666	8,455				
	38 Schenectady and Troy.....	20 1/2	640,800				28,043			32,646	6,365				
	39 Syracuse and Utica.....	53	1,115,897	none.	16,000	62 1/2	163,701	72,000		192,061	120,992	8			
	40 Tonawanda.....	43	727,332				76,227			114,177	75,865	5			
	41 Troy and Greenbush.....	6	180,000												
	42 Troy and Saratoga.....	25	475,801				44,325	21,000		38,502	9,971	2 1/2			
N. Jersey	43 Utica and Schenectady.....	78	2,168,165	none.	20,000	100	277,164	180,000	9	331,932	199,094	8			
	44 Camden and Amboy.....	61	3,200,000				682,832	383,880		784,191	404,956				
	45 Elizabethtown and Somerville.....	26	500,000												
	46 New Jersey.....	34	2,000,000												
	47 Paterson.....	16	500,000									6			
Penn.	48 Beaver Meadow.....	26	1,000,000												
	49 Cumberland Valley.....	46	1,250,000												
	50 Harrisburg and Lancaster.....	36	860,000	645,929									77,538	9,988	
	51 Hazleton branch.....	10	120,000												
	52 Little Schuylkill.....	29	900,000												
	53 Blossburg and Corning.....	40	600,000												
	54 Mauch Chunk.....	9	100,000												
	55 Buck Mountain.....	4	72,000												
	56 Minehill and Schuylkill Haven.....	19 1/2	396,117	25,000	7,019	50			12			12			
	57 Norristown.....	20	800,000												
	58 Philadelphia and Trenton.....	30	400,000												
	59 Pottsville and Danville.....	29 1/2	1,500,000												
	60 Reading.....	94	9,457,570	7,447,570	40,200	50				597,613	343,511				
	61 Schuylkill valley.....	10	1,000,000												
	62 Williamsport and Elmira.....	25	400,000				20,000								
	63 Philadelphia and Baltimore.....	93	4,400,000				43,043	200,000			210,000				
Delaware	64 Frenchtown.....	16	600,000												
Maryld	65 Baltimore and Ohio, (1st Oct.).....	188	7,742,410	1,153,709			575,235	279,402		658,620	346,946		738,603	374,762	3
	66 Baltimore and Washington.....	38	1,800,000				177,227	71,691		212,129	104,529		208,813	95,094	6
	67 Baltimore and Susquehanna.....	58	3,000,000												
	68 Wrightsville, York and Gettysburg.....	12 1/2	500,000												
Virginia	69 Greenville and Roanoke.....	18	284,433	37,544	2,000	100				25,268	6,074	3			
	70 Petersburg.....	63	969,880	63,000	7,690	100				122,871	72,898	6			
	71 Portsmouth and Roanoke.....	78 1/2	1,454,171												
	72 Richmond, Fredericksbg and Potomac.....	76	800,000							185,243	85,688				
	73 Richmond and Petersburg.....	22 1/2	700,000												
	74 Winchester and Potomac.....	32	500,000												
N. Car.	75 Raleigh and Gaston.....	84 1/2	1,360,000												
	76 Wilmington and Raleigh.....	161	1,800,000									5			
S. Car.	77 South Carolina.....	136													
	78 Columbia.....	66	5,671,452		34,410	75	201,464	77,456		532,871	140,196				
Georgia	79 Central.....	190 1/2	3,000,000	500,000	22,500	100	227,532	93,190		328,425	180,704				
	80 Georgia.....	147 1/2	2,650,000				248,026	158,207		248,096	147,523				
	81 Montgomery and West Point.....	89	500,000	170,000		100				35,000	15,000				
Kent'ky	82 Lexington and Ohio.....	40	450,000												
Ohio.	83 Little Miami.....	40	400,000												
	84 Mad river.....	40	152,000												
Indiana	85 Madison and Indianapolis.....	56	212,000	50,000			22,110	8,639	8	39,031	10,065	9 1/2	24,984	3,280	
Canada.	86 Champlain and St. Lawrence.....	15						12,000		58,000	24,000				

Correspondents will oblige us by sending in their communications by Monday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N.Y.

Saturday, January 3, 1846.

The American Railroad Journal as it was and as it is.

This number commences the fifteenth year of its publication. Very few indeed of the most intelligent, at the time of its commencement, anticipated the half of what has been accomplished in the construction, improvement, and capacity of railroads.

Great however as have been the advances made in the system—so great indeed that many people are of the opinion that it has reached its maximum—we are now only beginning to understand its susceptibility of improvement; and are therefore only now prepared to carry it forward with facility and success.

At the period when this Journal was commenced, the wonder seemed to be that any one of sane mind should for a moment think of finding materials for such a periodical; but how completely have things changed in fourteen years—the difficulty now is to select, from the mass of matter, in relation to the subject which comes before us, that which shall be most useful to the cause. A better illustration of the progress of railways need not be desired than a comparison of the first number of the Journal with the last; and it may well be asked by its friends: what may not, rather than what may be accomplished within the next period of fourteen years! How important then that those having the direction of railroads should be early apprized of all improvements in the construction or management of them. A single paragraph sometimes contains the elements of economy, and safety, the two great objects so desirable to those who own, and those who use such works. There are many "very small matters" which are of great importance; and as it has been recently observed to us by a professional gentleman, "we venture to say that more meritorious projects have been totally ruined from want of system and proper management of very small matters, or more properly speaking from mismanagement of details, than from any other cause." It is therefore important that there should be a medium for communicating the details of improved management, economy and safety, and that medium should be sustained by those who are interested in the subject, which includes all who own and who use railroads.

It is quite important to railroad companies to be early apprized of improvements in even small matters, by which they may promote economy of management, and safety of passengers; but it is equally important to those who travel to be familiar with all improvements in the system calculated to promote

their own safety—that they may be able to know at a glance whether those roads, on which they may be called to travel, have adopted such improvements as experience has shown to be important and essential. With a well sustained and widely circulated periodical, issued frequently, and devoted to the success of the system, they may be, at the expense of a few shillings, constantly informed of what is passing, and improving, either in construction or management of road and machinery, as well in Europe as in this country; and thus be enabled to profit, not only by their own experience, but also from the investigations and experience of the thousands of able minds now devoted to the improvement of the system.

Improvements in machinery and construction of railroads often require to be illustrated by engravings, which are expensive. We have now before us foreign journals, containing important articles in relation to railroads, and especially the atmospheric system, with numerous illustrations, the engraving of which on wood, will cost not less than \$150, which alone puts them, or most of them, beyond our reach, because the present income of the Journal will not warrant us to incur the expense. This should not be so—and would not be, if the numerous railroad companies in the United States were all to do as a few—about 15 only—have done, viz: authorize the publication of their ordinary advertisements in the Journal at—or take as many copies of it as would be equivalent to—twenty dollars a year. Or if the directors and shareholders, who ought to know of all improvements as they are made, were one in ten of them to take it—or if one in a thousand of those who travel on railroads, and therefore ought to be able to see at a glance if the cars have a "safety beam," or other apparatus, to prevent disaster and death, in case of the breaking of an axle, were to pay for it we should be able to give a much greater quantity of reading matter and also, when important, to accompany it with the necessary illustrations.

Although but about one-half the number of railroad companies, or advertizers, indicated in our recent circular, (thirty at \$20 each,) as necessary to warrant the commencement of another volume, have authorized us to insert their advertisements; and notwithstanding the expenses during the past year, in consequence of the increased size, and more frequent publication, have exceeded the entire receipts from its subscribers—as we think we do not mistake the indications of the times, and have an unwavering confidence in the steady and rapid advancement of the railroad cause, to an extent little anticipated by the many—we have resolved to continue the Journal another year, and to endeavor to make it so essential to those interested in the cause, that they cannot afford to do without it. To enable us however to render it more useful to its readers, and at the same time to insure an income from it which shall

not only cover its necessary expenses, and enable us to give numerous engravings and other useful improvements, but also, hereafter to give us a fair return for our labors, we now put the price at five dollars a year; and we are willing to risk its future prosperity upon the ready acquiescence of its present subscribers in this—to us, and to the increasing efficiency of the work—essential measure, as we are sure the gain will be theirs.

To those directly interested in the construction and management of railroads, who have received it during the past fourteen years, or indeed any portion of that period, we do not fear to appeal for testimony as to its having been worth its cost; and yet we desire, at the same time, to express to them, with grateful emotions, our abiding obligations for their continued confidence and support through the long journey in which they have borne us company; and for the kindness with which they have overlooked our many errors. The future is before us, and we can only say that our best efforts will be given to make the Journal useful to the cause, and acceptable to its patrons. It will be hereafter issued on Saturdays, instead of Thursdays, at five dollars a year in advance.

The Atmospheric Railway.

We gave in number 51, Dec. 18, a letter from a gentleman long resident in London, in which he speaks of this new system of propulsion as gaining rapidly upon, and as likely, at an early day, to outstrip its immediate predecessor, the locomotive, as that wonderful machine did the stage-coach. We find, also, in our London journals of recent dates, descriptions, with illustrations, of six different plans, viz, Clegg and Samuda's, Nickel's, Pilbrow's, Mallet's, Julien and Vallerio's, and Pinkus, improved. It is said that Mr. Pinkus, an American, formerly resident in Philadelphia, was the original inventor of the system, and that those now in use, and most of the numerous other plans proposed, are modifications of his original plan, whilst he has himself made much greater improvements upon that plan than any other person who has given attention to the subject, as his present plan dispenses with one of the main tubes, and yet allows the working of a double track, trains running in opposite directions at the same time.

A description of the plan of Clegg & Samuda, with illustrations, estimates of construction and working, with copious extracts from the investigation before the committee of Parliament, was published in the Railroad Journal for August and September, 1844. Since then several new lines have been authorized upon this plan, and the work has been progressing gradually upon them; and five miles have been put in successful operation on the Croydon and Epsom line, on which the movement is often at the rate of 40 to 50, and sometimes even 70 miles an hour. Such, indeed, has been the success of the experiments upon this line, that the works on other lines are urged forward with great spirit, and a portion of the South Devon atmospheric railway, which is to be 52 miles long, will soon be completed; and then we shall have additional means of testing its utility.

There is, we believe, at this time over two hundred and fifty miles of atmospheric railway in course of construction in England, and they are also making experiments, we understand, upon it in France, Hamburg, and in Austria; so that we shall not have to wait long to have it thoroughly tested, without incurring any expense ourselves. When the

system shall have been brought to a high state of improvement in Europe, we will in this country give it the "finishing touch," and then bring it into use upon some of our high grades and undulating lines. In order, therefore, to keep our readers apprised of the progress made with it in Europe, we shall republish from the English journals several of the plans now before us, with their illustrations, even though the cost of the wood engravings will be very considerable, not less probably than one hundred dollars, perhaps more. It is, however, too important a matter to be omitted, nor can it be well understood without the illustrations. We shall, therefore, give such as we deem best calculated to diffuse just ideas in relation to its value, and rely upon the readers of the Journal to sustain us in so doing.

We give "Mallet's" plan in this number, and shall have "Nickel's" ready for our next; and probably at an early day, "Pinkus's," with his *atmospheric locomotives and double track, with one tube.*

THE RAILROAD AND CANAL DISCUSSION IN VIRGINIA.—In no part of the United States does there seem to be so great a want of *practical working talent* as in Virginia. Her men of ability seem most of them, to have been occupied up to the present time, with federal politics, and to have given hitherto, little attention to subjects on which the welfare and prosperity of their state most essentially depend. It can be ascribed to this cause only, that there should be at this time any question among her leading men, as to the *kind* of improvement they should adopt for commanding a large portion, and *probably a larger portion than any other route can*, of the trade and travel of the west. It is evident, from an inspection of the map, that the shortest and most favorable route for a railroad between the Atlantic and western waters, is to be found along the valley of the *James and New rivers*, the waters of which interlock in the valley of *Virginia*; thus admitting of a railroad throughout the whole distance of *easy grades* adapted, like the Reading railroad, to heavy trade as well as travel; and yet a discussion has been gravely going on for some months past in the Virginia newspapers, whether it be not better to construct in lieu of an improvement for which the state has a line so *peculiarly adapted*, which would be in every respect the preferable one, and by far the most economical, a continuous canal of doubtful practicability, and the summit level of which would probably sometimes be dry in summer; and also, in consequence of its great elevation, a larger portion of the year interrupted by ice than even our Erie canal, which would be of enormous lockage, and of corresponding expense!

Magna est veritas et prevalebit. We are glad to see truth has prevailed in Virginia, and that at a recent meeting of the James river and Kanawha company at Richmond, it has been determined to terminate the canal at *Buchanan*, and to apply to the legislature to authorize a railroad from that point by the best route to Guyandotte.

We trust this wise decision may be followed up by action by the legislature. We hope so for the country at large, as well as for the state of Virginia, for no work that we know of would do more to bind together the states of this confederacy, and therefore none is more strictly national than the one in question; while it would confer on Virginia, inappreciable benefits. Being the shortest and most favorable route for travel between the Ohio and Atlantic, and passing by the celebrated mineral springs of Virginia, it would become at once the great thoroughfare of western travel, while it would pour into the

James river canal the tobacco, the hemp, the flour and other products of the west, and receive from it the dry goods and merchandise destined to Cincinnati, Louisville and St. Louis, bought by western merchants in New York, and sent by water to Richmond, and thence by this great line of improvement to the Ohio river, as cheaply and as expeditiously as by any other route. Viewed in this aspect and as affording an important facility to the trade of New York, the improvement in question should be regarded as one of much interest to this city, by our intelligent merchants, who will, we hope, at the proper time, lend a helping hand, if necessary to promote it, in the event of its execution being devolved on an incorporated company.

If the citizens of Virginia are wise, they will prosecute at once this great work, which would pay a liberal per centage on its cost, render the millions expended on her canal immediately productive, vivify the interior of the commonwealth and build up her metropolis. Every day that she delays it, is so much done towards fixing the trade and travel of the west in other and less eligible channels, and thus impairing to a greater or less extent her great natural advantages and unrivalled facilities. We are encouraged by the language of the governor in his late message, a portion of which we give in a recent number of the Journal, to believe that the right spirit is coming over the people of Virginia and that action will follow.

Hartford, Danbury & New York Railroad.

We have received, and thank Messrs. Godwin, Howe and Cowles, "executive committee" for their able "Report on the business and surveys of the contemplated New York and Hartford railroad, via Danbury," accompanied by a map, with the description and estimates of the engineer Edward H. Broadhead, esq., of the cost of this truly important work. We say important, as it is designed to connect the city of New York with Boston by a comparative—short interior line, on which there is no chance of foreign aggression or interruption to passengers or the mails by drawbridges or ferries. Munitions of war and freight can be carried with certainty at all seasons. This is not all; the construction of this railway, in addition to placing us in direct connection with Boston from the heart of this city, will throw open to us the whole valley of the Connecticut river above Hartford, "numbering one million of population," and the valley of the Housatonic to Stockbridge. The importance and value of this trade it is difficult to estimate. Already a railway is completed from New Haven by Hartford and Springfield to Northampton; destined at no distant day to reach Burlington the Canada line, etc.

Our limited space this week, prevents us giving in full, the details of statistical facts relative to the manufactures of the five counties in connection with this road. These details, prepared with great care, are made up from the tables prepared by authority of congress in 1840. We give the results of table A, showing of the trade and manufactures of the counties of Hartford, New Haven, Litchfield, Fairfield and Tolland; viz:

Population in 1840	212,593
Factories, furnaces and mills	1,639
Persons employed	15,603
Value, hardware, machinery and metals	\$3,981,420
wool, cotton, silk and mixed goods	2,987,063
hats, leather, paper, etc.	4,689,633
cordage, carriages, furniture, etc.	3,661,104
Total value of all manufactures	15,319,220
capital invested in do.	9,487,973

Number of mercantile houses	1,223
Capital in trade and commerce	6,057,956
Total capital in trade and commerce	15,545,928

Table B gives the statistics of the following sixteen towns, viz:—Hartford, Wethersfield, New Britain, Farmington, Bristol, Plymouth, Waterbury, Woodbury, Waterbury, Middlebury, Oxford, Southbury, Newtown, Brookfield, Danbury and Ridgefield, through which the road passes, has

Population	51,223
Factories and mills of all kinds	425
Persons employed in do.	6,386
Capital in manufactures	\$3,914,914
Value of manufactures	6,408,992
Capital in trade	2,680,995
Total capital in trade and manufactures	6,595,909
Total tonnage	89,041
Tons of exports	34,180
Tons of imports	54,861
Estimates of travel by public conveyances	98,519

Table C gives a similar exhibit of the following twenty-two towns, eleven north and a like number south and within two miles of the line, viz: East Hartford, East Windsor, Manchester, Glastenbury, Middletown, Southington, Wolcott, Prospect, Bethany, Derby and Reading on the east and south and New Fairfield, Roxbury, Washington, Bethlehem, Litchfield, Simsbury, Harwinton, Burlington, Avon, Bloomfield and Canton on the north of the line which presents the following results.

Population	46,146
Factories and mills of all kinds	477
Operatives employed	4,175
Capital in manufactures	\$2,589,910
Value of manufactures	3,435,929
Capital in trade	680,270
Total capital	3,039,180

By the foregoing tables it will be perceived, that, without Middletown and Derby, there will be 108,156 persons, one-third the population of Connecticut, 942 factories and mills of different kinds, employing 11,000 operatives, producing annually near \$11,000,000 of manufactures and employing \$10,000,000 of capital, that will, on the construction of this road to connect either with the Harlem or New York and Albany railroads, present sufficient local business to pay an interest of above seven per cent. on the liberal estimate of its cost and equipment, \$1,790,706.

The long travel from New York to Boston, by Norwich, Stonington and Point Judith is stated at 175,000 persons. Of this number only 27,222, are estimated in the following table of income and expenses.

16 towns on the surveyed lines; 11 towns east and south; 17 towns north—44 towns.

Existing tonnage of the route	134,959
Existing travel of the route	167,041
Amount to be counted on as through, tons	43,929
" " " passengers	63,968
Eastern long " " "	27,222
Total amount	\$211,033
Passengers and freight to and from the Housatonic railroad; estimated at	10,000
Mails, Express, etc.	15,000
Showing for the gross annual receipts	\$236,033
Deduct from this expenses of every kind for maintaining and operating road	82,500
And there remains for the net annual income of the railroad	\$153,533

Which, upon a capital of two millions, shows an excess of \$3,533, over seven and a half per cent.

The committee truly say "that these estimates will be regarded as exaggerated, your committee can hardly believe, as they are based on business and travel that now exists." It is well known that railways double and even quadruple business; in fact they universally create their own business. It is but reasonable to believe that this region, the bee hive of New England, will rapidly extend their manufactures on being placed within three or four hours of the commerce of this city. The report of the committee is replete with information. It extends over 29 pages and, we think, must command the attention of capitalists who desire a safe investment.

We are forced by our space, to be brief in noticing the report and estimates of Mr. Broadhead. These estimates and minute details occupy 77 pages. The towns named show the general direction of the road, which will be found in no place to vary three miles from a direct line, starting from Hartford via Danbury, to intersect the valley line of the Croton river by Owensville, and its tributaries, as surveyed by the New York and Albany railroad company.

The distance from the city hall by White Plains, Owensville and South East, to Hartford, is 124 miles. By Ridgefield, Poundridge and Bedford, 120 miles. Both routes are preferable in grades and curves to either the New York and Erie or the Western railroads. On the latter there are 43 miles of from 40 to 83 feet grades per mile; 18 miles from 60 to 83 feet, and 14 miles from 74 to 83 feet. The smallest curve on the Western is 883 feet, while on the road to Hartford there is no curve of less than 1000 feet and in this state of 2000 feet radius. The following table is the summary of inclinations and distances via North Farmington, North Bristol and Danbury to South East.

Inclination in feet per mile.	Distance in miles.	Ascent in feet.	Descent in feet.
Level.	8-4753		
0 to 10	2-4250	8-225	6-000
10 to 20	3-7500	30-000	26-050
20 to 30	3-7000	72-700	17-600
30 to 40	2-6500	70-900	30-000
40 to 50	5-0750	66-000	175-100
50 to 60	37-8847	1357-250	903-450
Totals.	63-9600	1605-075	1157-200

Surveys and full estimates at liberal prices are made on three routes. We give the central estimate. Nos. 10, 11, 12, 13, 14 and 15, the sections west of the Naugatuck being the same on the several lines. The cost on the three lines varies from \$26,360 to \$29,174 per mile. The estimate for the central line is \$27,997.

Farmington North Route, by the way of North Bristol to State line at South East.

No. of divs. forming complete route.	Miles.	Length. Chains.	Amount.
1	8	13	79,981 34
5	4	49-78	64,054 73
6	2	06	5,704 58
7	2	53	33,342 64
9	3	02	94,819 21
10	6	15	123,451 06
11	6	32	117,953 25
12	12	44	195,295 64
13	7	70	147,086 56
14	5	00	47,359 34
15	5	32	17,912 66
Fence.....			39,437 80
Land damage.....			50,000 00
Equipments.....			230,600 00
Superstructure.....			543,660 00
Totals.....	63	76-78	\$1,790,708 81
Per mile.....			\$27,997 32

This estimate is based on the weight of the iron for a T rail 50 lbs. to the yard, or 94 1/2 tons to the mile, the price, \$70 being eight dollars per ton more than the estimate of professor Twining for the

sound route from New Haven to Harlem river.—Yet the average estimated cost for the interior, is less than by the sound route. The plan for the superstructure is to be the best now in use in this country, and to cost \$8,200 per mile for a single track.

It is proposed to build permanent iron bridges 120 feet span, after the plan of S. Whipple of Utica, over the Naugatuck and the Housatonic rivers.—The Naugatuck iron bridge is estimated to cost \$32,944; the Housatonic \$42,174.

As these bridges are above navigation the expensive draws required on the sound route will be avoided. It is estimated that the saving in time will make up for the difference in distance. The cost per mile according to prof. Twining's report, exceeds the interior route, above \$4000, with a much greater extent of perishable material in wooden bridges. This will be avoided by the plan of iron bridges. There is another consideration of no small importance to which we would draw attention, viz: the risk and delay to passengers, from the numerous draws on the sound route, while the coasting craft and steamboats that are to be interfered with by the railway, may get entangled in the draws so as to prevent certainty in the delivery of the mails.

There will be no difficulty in running, by the interior route, the distance to Boston within 9 hours. In every point of view, and particularly in the event of a war with England, this road for the defence of this city should claim the attention of the general government, as completing the only link that is wanting for a continuous line of protected sea board railway from Maine to Washington.

Central Railroad, and Banking Co. Co.

We find in the Savannah Republican the annual report of R. R. Cuyler, president, and L. O. Reynolds, chief engineer of this company. From these reports we learn that the total receipts for the past year amount to \$368,450 75, or \$40,026 74 greater than the previous year, and, had the transportation of cotton been equal, during the months of September, October and November, to that of the corresponding period of last year, the receipts would have been still further increased about \$30,000; but, owing to a short crop the receipts for the last quarter of this year fell considerably below those of last year, even though the first eight months exhibit a large increase.

This road is completed as far as authorized by its charter, 100 1/2 miles to Macon; and has cost near \$3,000,000. The total indebtedness of the company is stated at \$669,334 63, and its resources, in addition to the railroad and its equipments complete, at \$239,233 71—or, deducting for losses or contingencies, say \$200,000. It is proposed to issue bonds, drawing 7 per cent., payable at a future day, for this indebtedness, and thus be able to commence paying dividends to the stockholders, and at the same time to create a sinking fund for the redemption of the debt; or, if not successful in disposing of the bonds, to pay off the debt directly from the earnings of the road, which, it is stated, may be done in three

years—and to issue stock to the shareholders for the amount of profits thus appropriated, which will increase the amount of stock from \$2,048,715 to \$2,600,000—an amount much below the actual value of the road and equipments; as its earnings will, in less than three years, pay 10 per cent. on its cost. It would do this even without the benefit of the contemplated important extensions, viz: the completion of the Monroe road, 101 miles, to Atlanta, where it will connect with the Western and Atlantic road to the Tennessee river; and also the road either from Macon, or from Barnesville to Columbus, about 100 miles, which is resolved on, thus reaching the best cotton growing region of Georgia. With these extensions and connections completed, the Central railroad must become one of the most productive roads in the country, a result richly merited by the steady and never faltering perseverance of its proprietors and officers.

We give in this number the report of the president, which evinces the right spirit, in the right place; and we have not a doubt of their entire success, and of ultimate ample and satisfactory returns to the shareholders who have so long persevered in their noble work. We shall give in our next the report of the chief engineer, as we have received it, unless we receive a copy in pamphlet, with tabular statements of receipts and expenses. We like to see the details. They are always instructing.

For the American Railroad Journal.

Kyanizing Timber.

In the Journal of the 13th of November, you published an interesting account of a successful experiment on the Taunton and New Bedford railroad, by which 17,000 spruce sills, Kyanized in the summer of 1840, were found upon a careful inspection last summer, to have endured the five years' use and exposure without any evidence of decay, or deterioration; "a single stick, selected indiscriminately, being taken out of the track, with a view to a critical examination. It was split open and presented as sound an appearance in every respect as new wood. The spike holes were sound, and the wood as elastic as the first day the spikes were driven."

The result of this invaluable experiment should be widely disseminated, and promptly acted on by the proprietors of every railroad that is intended for its legitimate use, and not merely as the base of a "fancy stock."

Nor is the experience acquired on the Massachusetts railway all we have to rely on in a question of such vital interest to the prosperity of railroads; you will find that there has been at least one other equally successful experiment made in the state of Maryland, and of two years' anterior date; as appears from the following notice, by the committee on publication, in the Journal of the Franklin Institute, February, 1844, page 99, viz:

"James Herron, civil engineer, has deposited at the hall of the Franklin Institute, a section of a Kyanized chestnut sleeper from the Baltimore and Susquehanna railroad, which was prepared in July,

1838, laid in August of the same year, and taken up for the purpose of examination in August, 1843, having been in actual service for five years, as is attested by Robert S. Hollins, secretary for the company.

"This interesting section, which may be seen at the hall, is in a perfect state of preservation; and it is stated by the officers of the company, that all the Kyanized sills are, without a single exception, as sound as the specimen referred to, while the unprepared sleepers of the same lot of timber have all decayed."

"The great benefit which seems to have been experienced in the case before us, from Kyanizing chestnut sleepers, is strictly conformable to experience upon several English railways; but this is the most striking example of the advantage of mercurial antiseptics that has fallen under our notice in the history of American railways, and on that account we call attention to it."

Besides the section above referred to, Charles Howard, Esq., president of the company, had, at Mr. H.'s instance, three more of the Kyanized sills taken up in January, 1844, and the half of each sill attested by the secretary of the company, forwarded to the Institute, where they may now be seen.

Those Kyanized sills are much harder than chestnut wood is known to be in its natural state, bearing a strong resemblance to oak in resisting the saw, and edge tools. They have been closely scrutinized by powerful microscopes, but not a trace of decay is discoverable; and a galvanic test, applied by a member of the Institute, showed the presence of the mercury in the centre of the sill.

The directors of the Baltimore and Susquehanna railroad, being convinced by this experiment, of the entire efficacy of the mercurial process, and having also ascertained, by extensive trials on large quantities of timber, that the sulphates of copper and iron tended to the destruction of the timber, instead of its preservation, they had suitable tanks constructed about eighteen months ago, and commenced the regular preparation of timber with corrosive sublimate.

For this valuable experiment, we are indebted to Isaac B. Trimble, Esq., C. E., who was then chief engineer of the Baltimore and Susquehanna road.

South Carolina was, however, probably the first to make an experiment of Mr. Kyan's process, as will be seen from the report of T. Tupper, Esq., president of the Charleston railroad, bearing date the 30th June, 1838, in which it is stated, "that experiments were then being made under his direction, for the purpose of testing the efficacy of a preparation of corrosive sublimate in giving greater durability to timber used in the construction of railroads, etc."

Mr. T. goes on to describe the success of the process in England; but at what time in 1837 or 1838 he commenced those experiments does not appear.

The result of those experiments we may gather, though rather imperfectly, from the official report of Col. James Gadsden, president of the South Carolina railroad, [which is now the title of the corporation,] to the stockholders, February 11th, 1845. He states the average durability of pine timber in a railroad does not exceed five years; and goes on to say:

"The durability of timber is a subject of deep interest to railroad companies; particularly as timber superstructures are beginning to claim a preference to those made of materials of a less yielding or elastic character; and has engaged the attention for many years of the successive boards of directors of the South Carolina canal and railroad company. The process of Kyanizing, which was tested to a small extent, seemed to act favorably on the fibres of the

wood to which applied; but the problem yet remains unsolved, whether the additional durability imparted is compensated by the extra expense incurred. The experiment with the mineral process recommended by Dr. Earle, and for which an appropriation was made by the South Carolina railroad company, Mr. Lythgoe, [superintendent of road,] thus remarks:—"I regret to say the process of Earlizing sap timber will not answer the purpose intended, as we are now compelled to take all we have used out of the road, as soon as we possibly can, in consequence of its having become so soft and decayed, as to allow the iron to imbed into it, thereby injuring the iron to a considerable extent."

In all those early experiments, a very extravagant price was paid for corrosive sublimate, and if the management of the process be not conducted with care and skill, the cost of preparing the timber will be doubled or even trebled; as may be seen from the official reports of the United States engineers, in which it is stated to have cost, for the common soaking of the timber, from 12 to 18 cents per cubic foot; whereas, it will be seen in the American Railroad Journal, of the 27th of November, and in the Journal of the Franklin Institute, of December, 1845, Mr. Herron states the cost of impregnating the timber for his patent track upon the Reading railroad, in the more effectual manner by hydraulic pressure, at five and one-half cents per cubic foot.

PRO BONO PUBLICO.

We are indebted to an esteemed correspondent for the foregoing communication in relation to the results of experiments in Kyanizing; and we shall feel greatly obliged to Mr. Howard, president of the Baltimore and Susquehanna railroad company, and to Col. Gadsden, president of the South Carolina railroad company, for any additional facts which they may possess in relation to this important matter. Seven years' experience and over, which they have both had in the use of Kyan's process, must have put them in possession of information of immense importance to railroad companies and others; and, as we recently gave currency to doubts as to its success and value, we now desire to give the utmost publicity to the results of experience, both in this country and in Europe. We have recently examined the specimens of chestnut cross ties, from the Baltimore and Susquehanna railroad, referred to above, now at the museum of the Franklin Institute, and found the timber as perfect, and apparently more solid than newly seasoned timber of the same kind. It was however taken out of the road more than two years since, and has not during that period been in a situation to decay as when in the track. We, therefore, renew the request for information from those who have made the experiments.

We have now in our possession a cross section cut from one of the sills, deposited with the Franklin Institute—for which we are indebted to the kindness of Wm. Hamilton, Esq., actuary of the institute—and shall be pleased to exhibit it to those who take an interest in the matter.

Boston Water Commissioners Report.

We have received, through the politeness of John B. Jarvis, Esq., one of the board, a copy of the report made by the commissioners to the city council, in relation to supplying the city of Boston with pure water.

Examinations and estimates of three different sources of supply are given, together with chemical examinations of eleven differ-

ent samples of water, by Benjamin Silliman, Jr., of Yale college, which render the report exceedingly valuable in a scientific point of view, as well as interesting to the people of Boston, who will be able hereafter to know the qualities of the water used by them, as well as the source and cost of supply. Crowded as our columns are we give the following extract from the report, showing the comparative cost, and supply, of the three sources, by which it will be seen that the Boston people can drink "good and wholesome water" at a much cheaper rate than we of Gotham.—Much good may it do them; they deserve, for their enterprize and public spirit, all the advantages they enjoy, or can command.

From the Report of John B. Jarvis and Walter R. Johnson, Esqrs., Commissioners for supplying the City of Boston with pure Water.

The commission has not been able to give any very specific attention to the question of damages for land and water rights. The former cannot be very important on either line, at least the amount cannot be material to a decision on the question as to which should be adopted. In regard to the latter, it was our intention to examine the facilities for constructing a compensation reservoir to supply Concord river with an equivalent for the water diverted from Long Pond. But time did not permit. It appears, however, from the general formation of the country, and from information obtained under the authority of your committee, that there are facilities abundantly adequate for this object. This method of compensating for the diversion of a running stream was successfully adopted in the works for supplying the city of Edinburgh with water. The stream there taken to supply the city was occupied to drive mills below the point where the water was taken, and compensation was made by furnishing an equal quantity by means of a reservoir. This is no doubt the true method for compensating Concord river, for the case under consideration, and it is believed to be of easy accomplishment.

The conditional contracts which we are informed by your committee have been made by the agent employed for this purpose, provide ample sites for such compensation reservoirs as will be necessary.

From the information above stated, and the knowledge we have of the land that will be required, a general estimate has been made, that will not, probably, be very far from the actual cost of the several routes.

In relation to Long Pond.

The proposition of Mr. Knight for the outlet mill power	\$100,000
The proposition for sites suitable and regarded sufficient for compensation reservoirs	20,000
Estimated cost of works to improve said reservoirs	10,000
Land required for aqueduct and reservoir	35,000
Total for Long Pond plan	\$165,000

In relation to Charles River.

Water right by proposition of the owner at Watertown	50,000
Land required for aqueduct and reservoir	20,000

Total for Charles river plan - - - \$70,000

In relation to Spot Pond.

Proposition of the owner	60,000
Land required for aqueduct and reservoir	15,000

Total for Spot Pond plan - - - \$75,000

It would not be necessary to take the whole stream, either at Long Pond or Charles river, in the first instance, or for some years to come. But the city should have the entire control of the stream, from which it derives its supply. Any partner or joint ownership will entail controversies and embarrassments, that will more or less interfere with the enjoyment of the city portion of the right, and which should not be permitted in a matter of so much importance as the proposed work. We therefore recommend the extinction of the whole water right at the outlet of Long Pond, or of Charles river, whichever shall be adopted.

Adding the preceding estimate for land and water rights, the total cost of delivering the water of the several sources on Beacon hill will be as follows:—

<i>Spot Pond.</i>	<i>Estimate.</i>	<i>Quantity</i>
Gen. estimate of work,	\$561,897	of water in
Estimated cost of land		wine gal's.
and water rights -	75,000	per day,
		1,500,000
Total - - -	\$636,897	

Charles River.

* General estimate -	\$1,923,536
Estimated cost of land	
and water rights -	70,000

Total - - - \$1,993,536 7,500,000

Long Pond.

General estimate -	\$1,681,599
Estimated cost of land	
and water rights -	165,000

Total - - - \$1,846,599 7,500,000

Reducing the above to their respective rates of cost for 1,000,000 of gallons per day, we find the result as follows:—

Cost from Spot Pond per 1,000,000 is	424,598
" Long Pond "	246,213
" Charles River "	265,805

From the above it appears that to provide for a supply of 7,500,000 gallons per day,

* The cost of introducing 7½ million gallons per day from Charles river, exclusive of land and water damages, is—

To Corey's hill	\$1,930,890
To Corey's hill reservoir	53,244
From Corey's hill reservoir to the city	589,402

Total to Beacon hill - - - \$1,923,536

The cost of introducing 7½ millions per day from Long Pond, exclusive of same damages, is—

To Corey's hill	\$1,038,953
To Corey's hill reservoir	53,244
From Corey's hill reservoir to the city	589,402

Total to Beacon hill - - - \$1,681,599

each million gallons obtained from Spot Pond will cost \$158,793 more than the same quantity will cost from Charles river, and \$178,385 more than the same quantity will cost from Long Pond.

Herron's Patent Railway Track.

We desire to call the attention of railroad companies to the advertisement of Mr. James Herron, C. E., on our first page. It relates to a matter of great and growing importance; and, if it possesses the merits claimed for it, deserves and will command the attention of those most interested, (the stockholders,) in its adoption. We examined, in 1844, a short piece of track on the Baltimore and Susquehanna railroad, laid upon this plan by Mr. Herron, which had been in use for several years, with very little expense of repairs, and was still in good condition; we have also recently passed over, and examined with some care, three miles of track laid by Mr. Herron on the Reading railroad, over which more than 820,000 tons of coal had passed during the last year, which appeared to be in at least as good condition as the other part of the same track, laid in the ordinary way, with cross-ties on rubble stone; and, indeed, when passing over it in the cars, we could perceive a decided difference, there being much less jar, and the cars running more quietly and pleasantly, even though the other part of the road is in excellent adjustment, considering the tonnage it has borne.

This three miles of track has been kept in adjustment, since the 9th of April last, by two common laboring men only; and I was told by the foreman that he could remove a timber from the track, and replace it in a few minutes, without interfering with the trains.

[Williamsport and Elmira Railroad Convention.]

Pursuant to notice, a convention of delegates from Pennsylvania and New York assembled at Elmira on the 3d instant. David Hudson, of Geneva, was president, assisted by several vice-presidents; and A. S. Thurston and L. Covell, of Elmira, and James Freeland, of Philadelphia, were secretaries.

Mr. Chester B. Evans presented to the meeting an able report, which concluded with the following resolutions:—

Resolved, That in the selection of a railroad route, the public interest, as well as the interest of the stockholders, require that the route presenting the most level surface and the shortest distance should be adopted, provided the object intended by the construction of the road is thereby attained.

Resolved, That the contemplated road from the village of Williamsport to the village of Elmira, and the continuation of the same road to the head of the Seneca lake, will

It will be remembered that Spot Pond can furnish but 1,500,000 gallons per day.

connect at the most important points the New York and Erie railroad, the canal, the Buffalo and Albany railroad, and lake Ontario, at Sodus bay, with the canals and railroads of Pennsylvania.

Resolved, That in a national point of view this road is of great importance, as it is the most direct route from the northern frontier to the capital of the Union.

Resolved, That the importance of reaching by railroads and canals the coal and iron regions of Pennsylvania, is becoming more and more apparent to the citizens of the central and western parts of the state of New York and the counties bordering on lakes Erie and Ontario; and that while we have no objection to the efforts now made to accomplish this object by other routes, and should rejoice to see railroads constructed for the accommodation of the public, we are convinced that nature has designated this route as the most direct, the cheapest, and affording the greatest facilities for trade, commerce and travel.

Resolved, That a railroad from Geneva, at the foot of Seneca lake, to the navigable waters of Sodus bay, on lake Ontario, a distance of twenty-two miles, would form an important link in the great chain of communication between the north and south, and afford new and great facilities for trade and commerce.

The Western and Atlantic Railroad.

We noticed, a few days since, a singular blunder in the publication, by a Georgia paper, of the report of the engineer on this road for 1844, as the report for 1845. The Georgia Journal of the 21st ult., published at Milledgeville, contains the true report just made to the governor, and it is altogether a different document from that published in the Savannah Republican. We see in it nothing indicating a necessity for a suspension of the prosecution of the work to Chattanooga. The engineer urges the importance of extending the road at once to Cross Plains, and that he looks to a connection ultimately with a railroad reaching from Nashville to Chattanooga is fairly to be inferred, from the fact that he states that at the end of this year a traveller leaving Washington city for Nashville may reach there by this road in two days less time than by any other route. We are gratified to find that there is nothing in the report calculated to interfere with the vigorous prosecution of the proposed road from Nashville to Chattanooga.

Worcester Railroad.—A meeting of this corporation was held yesterday afternoon, at the United States hotel. The committee appointed to take into consideration the expediency of uniting with the Western company, reported unanimously in favor of the measure, and the report was ordered to be printed in pamphlet form, for distribution among the stockholders. A committee of five, consisting of Messrs. Walker, Hathaway, Denny, Andrews and Leeds, was then appointed to make a detailed report of the cost, condition and prospects of the two roads; and the directors were instructed to cause this latter report also

to be printed, and appended to the former.—The meeting then adjourned to the second Monday in January. The Western railroad corporators meet this afternoon upon the same subject, and at the same place.

Cleveland and Columbus Railroad.—Mr. C. Williams, the engineer engaged in the survey of this road, has so far completed the examination of the two principal routes that he is enabled to give the length and grade of each. That which he terms the western route, passes through Ashland, and runs 3½ miles north of Mansfield, in Richland county, the present terminus of the Mansfield and Sandusky city railroad. The distance is estimated at 141 miles. The eastern route passes through Wooster, Loudonville and Mt. Vernon. The length of this line is 143 miles. Mr. Williams expresses himself highly satisfied with both routes; they offer facilities greatly beyond his expectations. The maximum grade on either does not exceed 40 feet to the mile in overcoming the summit, which is 728 feet above the level of the lake, and in no case will it be necessary to make a curve of less than 3000 feet radius. We consider the gentlemen engaged in this enterprise extremely fortunate in securing the services of Mr. Williams; his judgement and enterprise will secure them all the advantages which the country over which the route passes may offer.—*Ohio State Journal.*

Railroad Grievance.—Complaint is made of the refusal of the Camden and Amboy railroad company to carry freight on the road from Trenton to New Brunswick. All transportation between the towns on the New Jersey railroad and the towns west of New Brunswick is taken round by New York and the Amboy road. The Trenton Gazette says, "before the railroad was made we could go to New York for \$1 12½ or \$1 50. We are now charged \$2 50. It costs us \$1 25 to go to New Brunswick. Our trade with New York is greatly increasing, but the high fare, and the rules of the company respecting freights, are serious drawbacks upon it."

Railroad Iron.—We learn from the Danville Intelligencer that the Montour iron co. have supplied the quantity of railroad iron wanted at this time by the Lancaster and Harrisburg railroad company, and are now making and forwarding to the city of New York, for the Erie railroad company. They also have contracts to supply iron for some short roads in Schuylkill county; also, a road in one of the eastern states. For some time past the work of making railroad iron at the works of the Montour company has proceeded day and night, with remarkable steadiness, producing rails that are as perfect as it is possible to make them.—*Philadelphia Ledger.*

State Patronage to Railroads.—A bill has been introduced into the legislature of South Carolina, which provides that whenever any body of stockholders shall subscribe three-fifths to the stock of any railroad company, then the state will aid by a subscription to the other two fifths. The bill met with considerable opposition in the house of representatives—the opponents urging the dangerous

tendency of pledging the faith of the state to such enterprises. The friends of the bill, on the other hand, entered largely into the arguments of public benefit which would accrue from its passage. The bill was finally passed, and sent to the senate, by a majority of 6 votes only—58 yeas and 52 nays.

New Railroad Project.—The city council of Natches have called a meeting of the citizens of that place for the purpose of inviting examination into the expediency of extending the great line of Atlantic railroad, commencing at Savannah or Charleston, S. C., and ending at Montgomery, Ala., so as to strike Natches. The immense trade and travel, says the Free Trader of that city, which will soon be setting towards Texas, will make a project of this kind not only feasible, but perfectly practicable, of great convenience to the public, and profitable to the stockholders.—*Macon Telegraph.*

New Haven and Hartford, and Western Railroads.—The arrangements for the daily conveyance of passengers between Albany and New York, have already been announced. We are now authorized to say, that when, for any cause, the Hartford train does not connect, at Springfield, with the Boston train for Albany, an extra train will be immediately despatched with the New York passengers for Albany.—*Albany Citizen.*

Connecticut River Railroad.—The railroad from Springfield to Northampton is now completed, and a locomotive went over the route to Northampton meadows for the first time on Friday last. The cars commence running regular trips this week, connecting with the morning and afternoon trains at Springfield, to and from Boston, Albany and New York. The fare between Northampton and Springfield has been fixed at 50 cents.—*Springfield Gazette.*

KITE'S PATENT SAFETY BEAM.

MENSA. EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

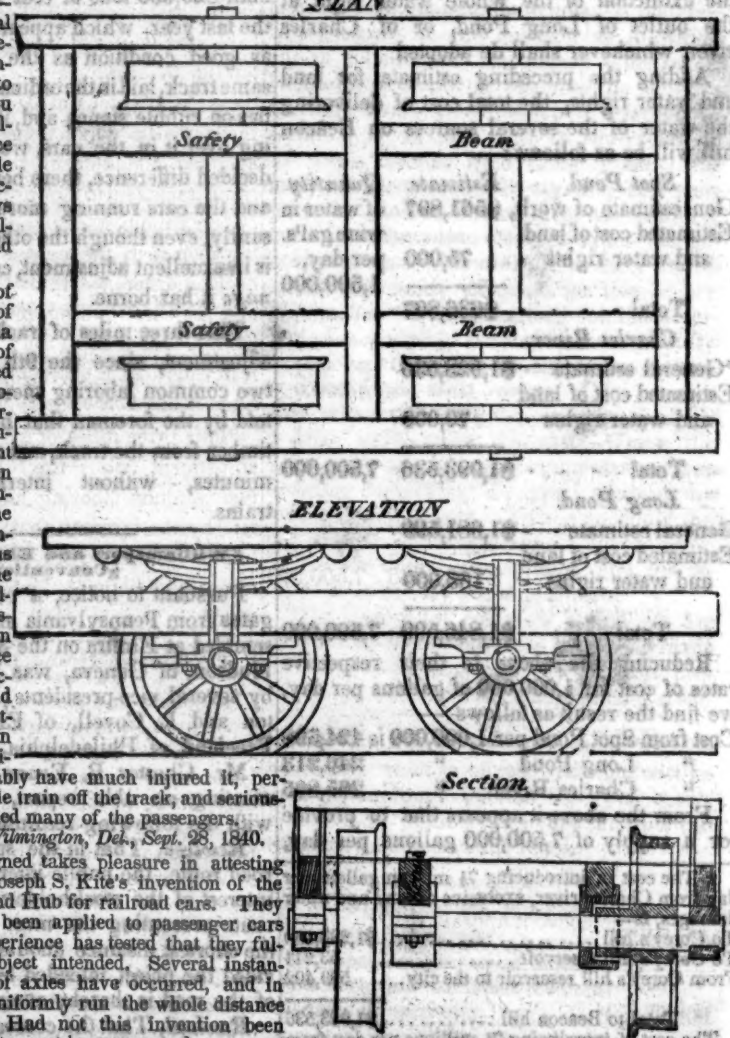
On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheeled passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.

The undersigned takes pleasure in attesting to the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent,
GEORGE CRAIG, Superintendant.

A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York.



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BOSTON AND MAINE RAILROAD.

Upper Route. Boston to Portland via, Charlestown, Somerville, Malden, Stoneham, South Reading, Reading, Wilbraughton, Ballardvale, Andover, North Andover, Bradford, Haverhill, Atkinson, Plaisiow, Newtown, Kingston, East Kingston, Exeter, South Newmarket, Newmarket, Durham, Madbury, Dover, Somersworth, South Berwick, North Berwick, Wells, Kennebunk, Saco and Scarborough.

Winter Arrangement, 1845 & 6. On and after Monday, October 20th, 1845, Passenger Trains will run daily, (Sundays excepted,) as follows, viz.

Leave Boston for Portland at 7 a.m. and 2 p.m. Leave Boston for Great Falls at 7 a.m., 2 p.m. and 3 p.m. Leave Boston for Haverhill at 7 a.m., 2 p.m., 3 p.m. and 5 p.m. Leave Portland for Boston at 7 a.m., and 3 p.m. Leave Great Falls for Boston at 6 a.m., 9 a.m. and 4 p.m. Leave Haverhill for Boston at 6 a.m., 9 a.m. and 11 a.m., and 6 p.m.

Special Train.—A special train will leave Boston for Andover at 11 a.m., and Andover for Boston at 3 p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

CHAS. MINOT,

October 20, 1845. 43 ly Super.

SPRING STEEL FOR LOCOMOTIVES.

Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required; large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,

ja5a3 Albany Iron and Nail Works, Troy, N. Y.

TO IRON MANUFACTURERS. THE Subscribers, as Agents of Mr. Geo. Crane, of Wales, having obtained a patent in the United States for his process of smelting Iron Ore with Anthracite coal, and holding an assignment of the patent obtained by the late Rev. F. W. Geissenhainer, are prepared to grant licenses for the manufacture of Iron according to Mr. Crane's principle.

A. & G. RALSTON & CO.

ja45 No. 4 South Front st., Philadelphia, Pa.

MACHINE WORKS OF ROGERS.

Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

a45 Paterson, N. J., or 60 Wall street, N. York.

FOR SALE AT A SACRIFICE—A LOCOMOTIVE ENGINE.

A Locomotive Engine, 4 wheels and Tender. Cylinders 10 in. dia., Stroke 16 in., Cylinders inside of smoke box. Weight of engine, with wood and water, about 9 tons. This engine and tender are new, and of the best materials and workmanship. If required, would be altered to a 6 wheeled engine.

Also, 1 20-horse High Pressure Steam Engine.

2 8-horse

1 Upright Hydraulic Press.

All of which will be sold low, on application to

T. W. & R. C. SMITH.

Founders and Machinists,

May 12th Alexandria, D. C.

GEORGIA RAILROAD, FROM AUGUSTA TO ATLANTA—171 MILES.

This Road in connection with

the South Carolina Railroad and

the Western and Atlantic Road now forms a continuous line of Railroad of 360 miles from Charleston to Cartersville, two miles west of the Etowa River in Cass County.

Rates of Freight, and Passage from Augusta to Cartersville.

On Boxes of Hats, Bonnets, and Furniture

per foot..... 15 cts.

" Dry goods, shoes, saddlery etc., per 100 lbs. 85 "

" Sugar, coffee, iron, hardware, etc. " 70 "

" Flour, bacon, mill machinery etc. " 33 1/2 "

" Molasses, per hoghead \$9; salt per bus. 22 "

Passengers \$9 50; children under 12 years of age and servants, half price.

Passengers to Atlanta, head of Ga. Railroad, \$7.

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Augusta.

J. EDGAR THOMPSON,

Ch. Eng. and Gen. Agent.

Augusta, Oct. 21 1845. *44 ly

NICOLL'S PATENT SAFETY SWITCH

for Railroad Turnouts. This invention, for

some time in successful operation on one of the principal railroads in the country, effectually prevents

engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee.

G. A. NICOLLS,

Reading, Pa.

ja45

GEORGE VAIL & CO., SPEEDWELL IRON

Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron

Tires, made from the best iron, either hammered or rolled, from 1½ in. to 24 in. thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wrought Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wrought Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions.

ja45ly

TO RAILROAD COMPANIES AND MANUFACTURERS OF RAILROAD MACHINERY.

The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tires for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,

ja45 N. E. cor. 12th and Market sts., Philad., Pa.

NORWICH AND WORCESTER RAILROAD.

On and after May 23, 1845, Trains will leave as follows, viz:—

Accommodation Trains, daily,

except Sunday. Leave Norwich, at 6 a.m., and 4 p.m. Leave Worcester, at 10 a.m., and 4 p.m.

The morning train from Norwich, and the morning and evening trains from Worcester, connect with the Boston, Western, and Hartford and Springfield railroads.

New York Train, via Steamboat. Leaves Norwich for Worcester and Boston, every morning except Monday, upon the arrival of the boat from New York, about 2 a.m. Leaves Worcester for Norwich and New York, at 5 p.m., daily, except Sunday.

New York Train, via Long Island Railroad. Leaves Norwich about 3 p.m., for Worcester and Boston, daily, except Sunday. Leaves Worcester for Norwich and New York, at 7 a.m., daily, except Sunday, and arrives in Norwich at 9 a.m.

Freight Trains. Daily, except Sunday.

Fares are less when paid for Tickets, than when paid in the cars.

EMERSON FOOTE,

Superintendent.

39 ly

LAWRENCE'S ROSENDALE HYDRAULIC CEMENT.

This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by

JOHN W. LAWRENCE,

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

39 ly

WESTERN AND ATLANTIC RAILROAD.

The Western and Atlantic Railroad is now in operation to Marietta, and will be opened to Cartersville, in Cass county, on the 20th of October, and to Coosa Depot, (formerly known as Borough's,) on the 20th of November.

The passenger train will continue, as at present, to connect daily (Sundays excepted) with the train from Augusta, and the stage from Griffin.

CHAS. F. M. GARNETT,

Chief Engineer.

43

LITTLE MIAMI RAILROAD.—DISTANCE 65½ MILES. FARE, \$1 50. From 1st November to 1st March Passenger Trains leave Cincinnati for Xenia at 11 o'clock A.M.

Returning, leaves Xenia at 8 o'clock A.M.

Freight Trains run daily, Sundays excepted.

At Xenia, Passenger Trains connect with daily lines of stages to Columbus, Wheeling, Cleveland and Sandusky city.

W. H. CLEMENT,

Supt. and Engineer.

ly1

RAILROAD IRON.—THE "MONTGOMERY" Iron Company, Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to

MURDOCK, LEAVITT & CO.,

Agents.

Corner of Cedar and Greenwich Sts.

C. J. F. BINNEY,

GENERAL COMMISSION MERCHANT

and Agent for Coal, and also Iron Manufactures, etc.

No. 1 CITY WHARF, Boston.

Advances made on Consignments.

Refer to Amos Binney, Boston.

Grant & Stone,

Brown, Earl & Erringer,

Weld & Seaver, Baltimore.

December 8, 1845. 1m 50

BACK VOLUMES OF THE RAILROAD JOURNAL

for sale at the office, No. 23 Chambers street.

NEW YORK AND HARLEM RAILROAD COMPANY.—Winter Arrangement.

On and after Monday, November 3d, the cars will run as follows: Leave City Hall for Harlem (125th street), Morrisania, Fordham, Williams' Bridge, Hunt's Bridge, Underhill's Road, Tuckahoe, Hart's Corners, and White Plains—7:30 and 10:30 a.m., and 1 and 3:30 p.m.

Extra trains for Yorkville, Harlem, Morrisania, Fordham, and Williams' Bridge, leave 27th street 7 a.m. for Williams' Bridge. Leave City Hall 9 a.m. (to Harlem only) and 11:30, 2:30, and 4:30 p.m. for Williams' Bridge.

Leave White Plains for City Hall—8:10, 11:10 a.m., and 1:45, 4:10 p.m.

Leave Tuckahoe for City Hall—9:30, 11:20 a.m., and 1:55, 4:20 p.m.

Leave Williams' Bridge for City Hall—7:45, 8:45, 11:45 a.m., and 2:15, 3:45, 4:45, and 5:45 p.m.

Leave Morrisania for City Hall—8:10, 9:10, and 10 a.m., and 12:10, 1:10, 2:40, 4:10, 5:10, and 6:10 p.m.

The freight train will leave City Hall at 12:45 p.m. and leave White Plains at 11:10 a.m. All freight must be at the City Hall between the hours of 10:30 a.m. and 12:30 p.m. The White Plain trains will stop, after leaving the City Hall, only at the corner of Broome street and the Bowery, Vauxhall Garden and 27th street.

An extra car will precede each train, 10 minutes before the time of starting from the City Hall, and will take up passengers along the line.

The City Hall and 27th street line will run every 6 minutes from 7:30 a.m. to 8 p.m.

The City Hall and 27th street night line will run every 20 minutes from 8 to 12 o'clock.

On Sundays the trains will be regulated according to the state of the weather. 1y 46

THE LONDON RAILWAY RECORD.
Edited by Mr. JOHN ROBERTSON, A. M., (connected from the commencement with the Weekly Railway press of England.)

The *Railway Record* is acknowledged to be the leading English Railway Journal, and is published twice a week in London, namely on Wednesday and Saturday. It contains copious and correct reports (by special reporters) of all railway meetings in the United Kingdom; ample Share Lists and Traffic Tables, showing the length, cost, capital and selling prices in the principal markets, with Editorial articles on the leading Railway topics of the day. The *Railway Record* contains also, a complete resume of French, Belgian and other foreign Railway affairs.

Subscriptions 13s. per quarter, to be transmitted in advance to Messrs. Dawson and Sons, Cannon st. London. Office 153 Fleet street, London. 46

BOSTON COURIER, DAILY, SEMI-WEEKLY and Weekly.

The *Daily* edition of the *Courier*, presents to merchants and others, an extensive medium of advertising. The circulation of the *Semi-Weekly* *Courier* (published on Mondays and Thursdays) is believed to be more extensive than that of any other similar Boston Newspaper. This publication embraces all the reading matter of the *Daily*, the Foreign and Domestic Markets, Review of the Boston Market, Prices current, and Ship News, prepared with great accuracy. The *Weekly* *Courier* contains as much of the matter of the *Daily* as can be crowded into a sheet of the same size, without ship news, prices current or advertisements.

Our extensions to obtain and publish authentic information on all topics proper for the columns of a newspaper—the state of trade, the prices of merchandise, the current news of the day, and the political movements in the various sections of the country—will not be abated. The marine department of the *Courier* has been inferior to none in copiousness or accuracy of detail, and it will be our endeavor maintain its reputation in this respect.

TERMS OF SUBSCRIPTION.

For the *Daily* *Courier*, for one year, in advance \$3.00
For the *Semi-Weekly* *Courier*, for one year... 4.00
For the *Weekly* *Courier*, for one year..... 2.00

JOSEPH T. BUCKINGHAM.
EBIN B. FOSTER.

BALTIMORE AND OHIO RAILROAD.**MAIN STEM.** The Train carrying the Great Western Mail leaves Bal-

timore every morning at 7 a.m. and 11 a.m. Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburg and Hancock, connecting daily each way with the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5 1/2 P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5 1/2 P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. 31 1y

CENTRAL RAILROAD-FROM SAVAN-

nah to Macon. Distance 190 miles.

This Road is open for the trans-

portation of Passengers and Freight.

Rates of Passage, \$3 00. Freight—

On weight goods generally... 50 cts. per hundred.

On measurement goods..... 13 cts. per cubic ft.

On brls. wet (except molasses

and oil).....\$150 per barrel.

On brls. dry (except lime).... 80 cts. per barrel.

On iron in pigs or bars, cast-

ings for mills, and unboxed

machinery..... 40 cts. per hundred.

On hhds. and pipes of liquor,

not over 120 gallons.....\$3 00 per hhd.

On molasses and oil.....\$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded

free of commission. THOMAS PURSE,

40 Gen'l. Supt. Transportation.

LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily,

at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lex-

ington daily, at 8 o'clock a.m. and 2 p.m. Dis-

tance, 36 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from

Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to

15th March) is 6 o'clock a.m. from Lexington, and

9 a.m. from Frankfort, other hours as above.

35 1y

KEARNEY FIRE BRICK. F. W.

BRINLEY, Manufacturer, Perth Amboy,

N. J. Guaranteed equal to any, either domestic or

foreign. Any shape or size made to order. Terms,

4 mos. from delivery of brick on board. Refer to

James P. Allaire,

Peter Cooper, } New York.

Murdock, Leavitt & Co. }

J. Triplett & Son, Richmond, Va.

J. R. Anderson, Tredegar Iron Works, Rich-

mond, Va.

J. Patton, Jr. } Philadelphia, Pa.

Colwell & Co. }

J. M. L. & W. H. Scovill, Waterbury, Con.

N. E. Screw Co. } Providence, R. I.

Eagle Screw Co. }

William Parker, Supt. Bost. and Wore. R. R.

New Jersey Malleable Iron Co., Newark, N. J.

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25,000 to 30,000 made weekly. 35 1y

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BOSTON AND PROVIDENCE RAIL-

road. Passenger Notice. Winter Arrangement. On and after Mon-

day, Nov. 3, the Passenger

Trains will run as follows:

For New York—night line, via Stoughton—

Leaves Boston every day, but Sunday, at 4 1/2 p.m.

Accommodation trains, leave Boston at 8 a.m. and

3 1/2 p.m., and Providence at 8 a.m. and 3 1/2 p.m.

Dedham trains, leave Boston at 9 a.m. 3, 5 1/2

and 10 p.m. Leave Dedham at 8 and 10 1/2 a.m.,

and 4 1/2 and 7 p.m.

Stoughton trains, leave Boston at 12 m. and

4 p.m. Leave Stoughton at 8:20 a.m. and 2 1/2 p.m.

All baggage at the risk of the owners thereof.

N.B. The last train to and from Boston and Ded-

ham, will be omitted in case of a severe snow

storm. W. RAYMOND LEE, Supt. 31 1y

BRANCH RAILROAD and STAGES CON-

necting with the Boston and Providence Railroad.

Stages connect with the Accommodation trains at

the Foxboro' Station, to and from Woonsocket. At

the Seekonk Station, to and from Lonsdale, R. I.

via Pawtucket. At the Sharon Station, to and from

Walpole, Mass. And at Dedham Village Station,

to and from Medford, via Medway, Mass. At Pro-

vidence, to and from Bristol, via Warren, R. I.—

Taunton, New Bedford and Fall River cars run in

connection with the accommodation trains.

NEW YORK AND ERIE RAILROAD

LINE. For Middletown, Goshen, and inter-

mediate places. Two daily

lines each way, as follows:

For passengers, the new, and commodious steamboat

St. Nicholas, Capt. Alex. H. Shultz, will leave the

foot of Duane street daily, [Sundays excepted] at 7

o'clock, A.M., and 5 o'clock, P.M., through in five

hours. Returning, the cars will leave Middletown

at 6 A.M., and 4 P.M. For further particulars

inquire of J. Van Rensselaer, Agent, corner of

Duane and West streets.

H. C. SEYMOUR, Superintendent.

Stages run from Middletown daily, in connection

with the afternoon line, to Bloomingburg, Wurts-

boro, Monticello, Mt. Pleasant, Binghamton, Owe-

go, Port Jervis, Honesdale, Carbondale, etc.

On Monday, Wednesday, and Friday, to Dun-

dash, Montrose, Friendsville, Lenox, Brooklyn, etc.,

etc. 31 1y

BALTIMORE AND SUSQUEHANNA

Railroad. The Passenger train runs daily

except Sunday, as follows:

Leaves Baltimore at 9 a.m., and

arrives at 6 1/2 p.m. Arrives at York at 12 1/2 p.m.,

and leaves for Columbia at 1 1/2 p.m. Leaves Co-

lumbia at 2 p.m., and leaves York for Baltimore at

3 p.m. Fare to York \$2. Wrightsville \$2 50, and

Columbia \$3 62 1/2. The train connects at York

with stages for Harrisburg, Gettysburg, Chambers-

burg, Pittsburg and York Springs.

Fare to Pittsburg. The company is authorized

by the proprietors of Passenger lines on the Penn-

sylvania improvements, to receive the fare for the

whole distance from Baltimore to Pittsburg. Balti-

more to Pittsburg.—Fare through, \$9 and \$10.

Afternoon train. This train leaves the ticket of-

fice daily, Sundays excepted, at 3 1/2 p.m. for Cockeys-

ville, Parkton, Green Springs, Owings' Mills, etc.

Returning, leaves Parkton at 6 and Cockeysville

and Owings' Mills at 7, arriving in Baltimore at

9 o'clock a.m.

Tickets for the round trip to and from any point

can be procured from the agents at the ticket offices

or from the conductors in the cars. The fare when

tickets are thus procured, will be 25 per cent. less,

and the tickets will be good for the same and follow-

ing day on any passenger train.

D. C. H. BORDLEY, Supt.

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Have now on hand and for sale,

300 tons 2 1/4 x 1/2 inch Flat punched Rails, Bars

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100 tons Heavy Edge Rails, 90 tons per mile.

30 tons 2 1/4 x 1/2 inch Flat Rails.

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